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INTRAMURAL AND INTERSCHOLASTIC ATHLETICS
IN SECONDARY SCHOOLS OF MASSACHUSETTS,
ENROLLING 200 OR FEWER STUDENTS

Submitted by

Daniel Vincent Kenefick
(A.B., Harvard, 1930)

In partial fulfillment of requirements for the
degree of Master of Education


1936

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CONTENTS

| Chapter | | Page |
|---------|--------------------------------|------|
| I | Introduction..... | 1 |
| II | Intramural Athletics..... | 7 |
| III | Interscholastic Athletics..... | 13 |
| IV | Summary and Conclusions..... | 50 |
| | Appendix..... | 59 |
| | Bibliography..... | 74 |



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LIST OF TABLES

| Table | Page |
|--|------|
| 1 Numbers and Percentages of Schools Maintaining Five or Fewer Sports In Their Intramural Athletic Program for Boys or Girls..... | 8 |
| 2 Numbers and Percentages of Schools Reporting Intramural Athletic Programs In Various Sports for Either Boys or Girls..... | 10 |
| 3 Numbers and Percentages of Schools Maintaining Five or Fewer Sports In Their Interscholastic Athletic Program for Boys or Girls..... | 14 |
| 4 Numbers and Percentages of Schools Reporting Interscholastic Athletic Programs In Various Sports for Either Boys or Girls..... | 15 |
| 5 Athletic Facilities, Their Condition, and Proximity to Schools..... | 18 |
| 6 Frequency of Mention of Certain Sources of Income as Among Three Most Important for Support of Athletics..... | 20 |
| 7 Data on Some of Common Items on Athletic Budget of Small Secondary Schools..... | 21 |
| 8 Frequency of Mention of Certain Items as Among Three Most Expensive on Athletic Budget..... | 22 |
| 9 General Administration of Boys' Athletic Program..... | 24 |
| 10 Data Concerning Coaches of Boys' Athletics..... | 25 |
| 11 Data on Officials for Boys' Interscholastic Athletics..... | 27 |
| 12 Numbers and Percentages of Schools Reporting Certain Student Qualifications for Athletic Participation..... | 29 |

| Table | Page |
|---|------|
| 13 Boys' Interscholastic Contests Held on Saturday..... | 31 |
| 14 Type of Team Played in Boys' Interscholastic Contests..... | 32 |
| 15 Numbers and Percentages of Schools Reporting Certain Distances Traveled to Play Contests Away From Home by Boys..... | 33 |
| 16 Averages of More Important Aspects of Boys' Interscholastic Sports..... | 35 |
| 17 Minima and Maxima of More Important Aspects of Boys' Interscholastic Sports For Which Aver- ages of Table 16 Have Been Determined..... | 36 |
| 18 General Administration of Girls' Athletic Program..... | 38 |
| 19 Data Concerning Coaches of Girls' Athletics.... | 39 |
| 20 Data on Officials for Girls' Interscholastic Athletics..... | 41 |
| 21 Girls' Interscholastic Contests Held on Saturday..... | 42 |
| 22 Type of Team Played in Girls' Interscholastic Contests..... | 44 |
| 23 Numbers and Percentages of Schools Reporting Certain Distances Traveled by Girls to Play Contests Away From Home..... | 45 |
| 24 Averages of More Important Aspects of Girls' Interscholastic Sports..... | 46 |
| 25 Minima and Maxima of More Important Aspects of Girls' Interscholastic Sports For Which Averages of Table 24 Have Been Determined.... | 48 |

CHAPTER I

INTRODUCTION

Problem and Scope

Purpose of investigation.-While teaching and coaching for four years in one of the smaller secondary schools of Massachusetts, the writer had an opportunity to study at first hand many of the problems which face small schools in their efforts to maintain an athletic program. Realizing what the limitations were in his own case, the writer often wondered what the situation was in other schools of similar size in the state. Consequently, a survey was made to determine what practices were being followed in schools of this type.

Extent of investigation.-A list of all secondary schools in Massachusetts that had enrollments of 200 or fewer students in the upper four grades was compiled. This included all grades in the regular four-year high school, and grades 9, 10, 11, and 12 of the junior-senior high-school systems. This list was drawn up from information secured from Part II of the Annual Report of the Department of Education of the Commonwealth of Massachusetts for the year ending November 30, 1935. This list totaled 88 schools.

Sources of Data and Methods of Investigation

Checking list.-A checking list was compiled and sent to the principals of the 88 schools mentioned above, with the suggestion that it be answered by the principal himself or by a teacher who understood the situation. The returns showed that in all but two cases it was answered by the principal himself.

The plan at first was to carry on an exhaustive survey of all aspects of both interscholastic and intramural athletics for both boys and girls in schools of the classification mentioned. A tentative checking list was drawn up covering all phases of the questions to be considered.

This checking list contained 60 pages. Realizing that the chances were very poor of securing replies from an adequate number of respondents on such a voluminous pamphlet, a successful effort was made to eliminate or condense many of the items. Since in all probability very little was being done with intramural athletics in this type of school, it was decided to confine that phase of the report to the number and types of athletic activities being conducted in the schools under consideration. Much space was also saved by listing questions only on the more common athletic activities, and leaving blank spaces in which the respondent could give similar information on the additional, though less common sports, that might be carried on in

1870

1870

1870

his school.

After much revision, the checking list (see appendix) was reduced to nine pages which covered the most important phases of the problem.

The covering letter and information concerning the name of the school, of the person reporting, his position, and the enrollment of boys and girls in each grade were on the first page.

The remainder of the checking list was divided into eight main divisions. The first of these concerned the types of athletic activities maintained by the school, with spaces to check whether they were on an interscholastic or intramural basis, for boys or girls, and for what grades they were available.

The second division was on athletic facilities. Here the respondent could designate the equipment owned by the school, its condition, and its proximity to the school.

The third part of the checking list covered the financing of the athletic program, giving information on the main sources of receipts and expenditures.

Part IV dealt with the administration of the boys' athletic program. Here data was secured on general administration, coaches, officials, and student qualifications. Miscellaneous information was obtained also on Saturday and evening contests, proportion of schedule played with

various types of opponents, and distance traveled to games played away from home.

Part V of the checking list provided spaces for listing the various sports conducted on an interscholastic basis and answering definite questions on the administration of each.

Parts VI and VII covered the administration of girls' interscholastic athletics. These questions were similar to those in parts IV and V which gave administrative data on the boys' program.

Part VIII provided an opportunity for the respondent to make any comments he might wish on this problem of interscholastic and intramural athletics in the smaller secondary schools.

This checking list provided the primary source of data for the thesis.

Personal visits.-Information secured by personal visits to ten of the schools in this group was used as a secondary source of data.

Percentage of returns.-Of the total of 88 schools in this group, to all of which checking lists were sent, 37 made returns. This means that the materials presented in this thesis are based on returns received from 42 per cent of all schools in this classification. The chances are

that if the checking list had been shorter, the percentage of returns would have been even more gratifying. Many of the respondents evinced not only surprise at the length of the list (there were approximately 750 possible answers on each one), but an earnest desire for a report on the results of the investigation.

Survey of Literature in the Field

Amount of material.--A scarcity exists of summaries of the type undertaken here of the practices being followed in the State of Massachusetts. Many books and articles have been written dealing with some of the items considered in this thesis, but most of them have been presented in a general style and do not give definite information based on a survey of the practices being followed in schools of a particular classification. Because of this fact, most of the literature in the field was of little help in writing this thesis. However, a few publications proved valuable.

Most valuable literature.--Monograph Number 27 of the National Survey of Secondary Education on Intramural and Interscholastic Athletics is a very fine publication on the type of problem being considered here. This monograph gives a survey of athletics for the secondary schools of all sizes for the entire United States. However, the report includes returns from only five schools from all New England that

have enrollments under 300. Several references will be made to this work in Chapters II, III, and IV of this thesis.

Monograph Number 6 of the National Survey of Secondary Education, The Smaller Secondary Schools, also devotes a few pages and tables to a summary of some of the items considered in this report.

The April, 1934 issue of the North Central Association Quarterly also contains four tables showing the percentages and numbers of schools maintaining certain interscholastic sports for boys and girls, and also the extent of participation in these sports by the student body. Several comparisons with these tables will be made in Chapters II, III, and IV of this thesis.

CHAPTER II

INTRAMURAL ATHLETICS

Definition and Phases Considered

Definition.--Intramural athletics may be defined as athletic activities carried on within the walls of an institution. "These activities shall be organized between specific groups within the institution, shall give equal opportunity of participation to all, and shall require participation of none."^{1/}

Phases considered.--As mentioned in the introduction, the investigation of intramural athletics was limited for various reasons to the numbers and percentages of schools conducting intramural programs in various sports for either boys or girls. Tables 1 and 2 give these data in condensed form.

Summary of Responses

Number of sports per school.--As expected, the number of schools reporting intramural programs in athletics was rather small. About half of the schools had no intramural athletic activities whatsoever for boys and a similar

^{1/}P. Roy Brammell, Intramural and Interscholastic Athletics, National Survey of Secondary Education. Monograph Number 27. United States Government Printing Office, Washington, D.C. 1933. p. 10

situation existed for girls. Of the schools that did maintain intramural programs, most of them had either one or two sports. In about one-fourth of the schools, one intramural sport is provided for boys and a similar provision is made for girls. In about one-fifth of the schools, two sports are provided for boys, and the same number for girls.

Table 1. Numbers and Percentages of Schools Maintaining Five or Fewer Sports In Their Intramural Athletic Program for Boys or Girls

| Number of Sports | Intramural Program | | | |
|-------------------------|--------------------|----------|-----------|----------|
| | For Boys | | For Girls | |
| | Number | Per Cent | Number | Per Cent |
| (1) | (2) | (3) | (4) | (5) |
| No sports----- | 17 | 46 | 18 | 49 |
| At least one sport----- | 20 | 54 | 19 | 51 |
| One sport----- | 9 | 24 | 9 | 24 |
| Two sports----- | 7 | 19 | 8 | 22 |
| Three sports----- | 3 | 8 | 1 | 3 |
| Four sports----- | 1 | 3 | 1 | 3 |
| Five sports----- | 0 | 0 | 0 | 0 |

A summary of the situation shows that about half of the Massachusetts secondary schools of this size maintain some sort of intramural program for boys, while a corresponding number do the same for girls.

The National Survey of Secondary Education, Monograph Number 27, covering the situation throughout the country,

shows that "35 per cent of the schools with enrollments of 100 or fewer, and 63 per cent of those with enrollments between 101 and 300 carry on intramural programs."^{1/}

The present study was limited to schools having 200 or fewer students. A comparison will show that the situation in Massachusetts is better than that of the smaller group reported by the National Survey, and not quite as good as that of the other group. However, "the number of schools conducting intramural programs increases with the size of the enrollment."^{2/}

Kind of sports maintained.-Basketball was the most popular sport by far for both boys and girls. Table 2 shows that about half of the schools conducted it for boys, while one-third did the same for girls. Although not strictly a sport, physical training ranked second with about one-third of the schools conducting it for boys, and the same number for girls.

For boys, baseball holds the next position with about one-fifth of the schools reporting it; this is less than one-half the number supporting basketball. Tag football and tennis follow, having one-tenth for each; this is about one-half that of baseball, and less than one-fourth that of

^{1/}Ibid. p. 11

^{2/}Loc. cit.

basketball. Smaller numbers conducted ice hockey, ping-pong, soccer, and track.

About one-sixth of the schools maintained field hockey for the girls; a similar number, tennis. Baseball was

Table 2. Numbers and Percentages of Schools Reporting Intramural Athletic Programs In Various Sports for Either Boys or Girls

| Sports | Intramural Program | | | |
|------------------------|--------------------|----------|-----------|----------|
| | For Boys | | For Girls | |
| | Number | Per Cent | Number | Per Cent |
| (1) | (2) | (3) | (4) | (5) |
| Archery----- | 0 | 0 | 1 | 3 |
| Baseball----- | 8 | 22 | 4 | 11 |
| Basketball----- | 17 | 46 | 12 | 32 |
| Field hockey----- | 0 | 0 | 6 | 16 |
| Football----- | 0 | 0 | 0 | 0 |
| Physical Training----- | 13 | 35 | 12 | 32 |
| Ice hockey----- | 1 | 3 | 0 | 0 |
| Ping-pong----- | 1 | 3 | 1 | 3 |
| Soccer----- | 1 | 3 | 0 | 0 |
| Tag football----- | 4 | 11 | 0 | 0 |
| Tennis----- | 4 | 11 | 5 | 14 |
| Track----- | 1 | 3 | 2 | 5 |
| Volleyball----- | 0 | 0 | 2 | 5 |

offered for girls in one-tenth of the schools. Track and volleyball attracted 5 per cent each.

One-tenth of the schools maintaining intramural programs stated that scholastic qualifications must be met in order to participate in these activities. In connection with this point, it should be remembered that "intramural

athletics are for all pupils, and any rules of eligibility which tend to keep pupils out of these sports are defeating the general purpose of these games."^{1/}

The responses to the checking list also gave the following data on intramural sports: about nine-tenths of the schools gave candidates a physical examination; one-fourth paid a part of the expenses for injuries to team members; about one-sixth required permits signed by the parents before students were allowed to participate in games; over three-fifths replied that members of a varsity team were eligible for intramural teams in the same sport. This last situation is regrettable if judged by the regulations of some of the better schools which state that "neither varsity players nor present squad members in a particular sport are eligible."^{2/}

Nine athletic activities were reported by the various schools for both boys and girls. It will be noted that the most popular sports are not those with much "carry-over" value, a fact to be lamented. This condition was also reported by the National Survey.^{3/} However, "there is little reason why smaller schools have to concentrate on sports with little or no carry-over value at the expense

^{1/}Ibid. p. 28

^{2/}Loc. cit.

^{3/}Ibid. p. 14

of those that possess this attribute."^{1/}

Other surveys.-Monograph Number 27 of the National Survey shows the four leading sports for boys to be in order basketball, track and field, baseball, and tennis. For girls, the list is in order basketball, volleyball, track and field, tennis, with baseball in fifth place.^{2/}

A survey was carried on in Kansas in 1927, for which 77 out of 86 schools sent responses. One of the questions asked if gymnasium work were offered. Sixteen schools answered that it was given to all students, while 19 replied that it was given to some.^{3/}

An investigation carried on in 1934 by the North Central Association showed that "although many activities were offered in intramural programs, basketball was the most popular sport."^{4/} The same report states that "for boys there are far more interscholastic teams organized than intramural; but for girls, three times as many schools have intramural teams as have interscholastic."^{5/}

^{1/}Ibid. p. 14

^{2/}Ibid. p. 15

^{3/}G.H. Marshall, "The Status of High-School Athletics in Kansas," School Review, 35: 113-20, February, 1927.

^{4/}E.E. Morley, "Report of Committee on Athletics in Secondary Schools," North Central Association Quarterly, Vol. VIII, Number 2. 454-64, April, 1934.

^{5/}Loc. cit.

CHAPTER III

INTERSCHOLASTIC ATHLETICS

Definition and Phases Considered

Definition.-Interscholastic athletics means athletic activities carried on between different schools; and in the situation under consideration, it will mean secondary schools of different towns.

Phases.-This investigation of interscholastic athletics in the smaller secondary schools of Massachusetts was carried out in much greater detail than that on intramural athletics. Some of the major topics considered for both boys and girls were as follows: sports maintained, athletic facilities, finances, general administration, coaches, officials, student qualifications, Saturday and evening contests, type of opponent, and distance traveled. Other items studied which pertained to each sport were: number of candidates, of weeks conducted, of contests per year, playing time of each contest, number of days practice carried on per week, and time in minutes of average practice.

Activities Maintained

Number of sports per school.-Ninety-seven per cent of all schools answering the checking list maintained some

sort of interscholastic program for boys. The only school not having a program was one that had just been organized and so had not yet time to adopt one. The percentage for girls was not so high, it being 76 per cent.

Table 3 shows that most schools maintained three sports for boys, while a few had four or five. The same table

Table 3. Numbers and Percentages of Schools Maintaining Five or Fewer Sports In Their Interscholastic Athletic Program for Boys or Girls

| Number of Sports | Interscholastic Program | | | |
|-------------------------|-------------------------|----------|-----------|----------|
| | For Boys | | For Girls | |
| | Number | Per Cent | Number | Per Cent |
| (1) | (2) | (3) | (4) | (5) |
| No sports----- | 1 | 3 | 9 | 24 |
| At least one sport----- | 36 | 97 | 28 | 76 |
| One sport----- | 4 | 11 | 16 | 43 |
| Two sports----- | 9 | 24 | 9 | 24 |
| Three sports----- | 19 | 51 | 2 | 5 |
| Four sports----- | 2 | 5 | 1 | 3 |
| Five sports----- | 2 | 5 | 0 | 0 |

shows that practically all schools had at least one sport for boys. One-half of the schools offered three sports; one-fourth, two sports; and about one-tenth, one sport. A few schools maintained four or five sports.

Sports for girls are more limited than those for boys. Table 3 shows the following conditions on this point: no sports, one-fourth of schools; at least one sport, three-fourths; one sport, about two-fifths; and two sports, one-

fourth. Most of the schools maintained only one sport; none, more than four sports.

Kind of sports.--Table 4 shows that baseball was the

Table 4. Numbers and Percentages of Schools Reporting Interscholastic Athletic Programs in Various Sports for Either Boys or Girls

| Sports | Interscholastic Program | | | |
|------------------------|-------------------------|----------|-----------|----------|
| | For Boys | | For Girls | |
| | Number | Per Cent | Number | Per Cent |
| (1) | (2) | (3) | (4) | (5) |
| Archery----- | 0 | 0 | 0 | 0 |
| Baseball----- | 35 | 95 | 6 | 16 |
| Basketball----- | 29 | 78 | 27 | 73 |
| Field hockey----- | 0 | 0 | 7 | 19 |
| Football----- | 13 | 35 | 0 | 0 |
| Physical training----- | 0 | 0 | 0 | 0 |
| Ice hockey----- | 2 | 5 | 0 | 0 |
| Ping-pong----- | 0 | 0 | 0 | 0 |
| Soccer----- | 3 | 8 | 0 | 0 |
| Tag football----- | 0 | 0 | 0 | 0 |
| Tennis----- | 3 | 8 | 2 | 5 |
| Track----- | 13 | 35 | 4 | 11 |
| Volleyball----- | 0 | 0 | 0 | 0 |

most popular sport for boys with all but two schools reporting it. Basketball ranked next with about four-fifths. Approximately one-third of the schools maintained football, while the same number supported track. Tennis, soccer, and ice hockey were the only other interscholastic sports reported; they were provided by very few schools.

The same table indicates basketball as the favorite

sport for girls, being conducted by about three-fourths of the schools. Field hockey and baseball were supported by about one-fifth of the schools. Track and tennis were seldom reported as being on an interscholastic basis for girls.

Results of other surveys.--Monograph 27 of the National Survey of Secondary Education shows that "almost without exception the secondary schools included in the report engage in interscholastic contests especially for boys, but that increasing numbers are abandoning the practice for girls."^{1/}

The same monograph reports that "these contests are limited primarily to the five sports of basketball, football, track, baseball, and tennis; the latter is the only one having carry-over value."^{2/} These sports are ranked in the order mentioned, on the basis of the number of schools supporting them.^{3/}

The North Central Association carried on an investigation in 1934 which considered this phase of interscholastic

^{1/}Op. cit. p. 49

^{2/}Ibid. p. 50

^{3/}Loc. cit.

athletics.^{1/} One part of this report covered 808 schools of enrollments under 200 that belonged to the association. The chief interscholastic sports being carried on for boys were basketball, football, track, baseball, and tennis. The percentages of schools maintaining them were respectively 94, 68, 56, 33, and 14.^{2/}

This same report lists the main sports for girls as basketball, tennis, track, baseball, and volleyball. The percentages of schools maintaining them were respectively 78, 15, 13, 5, and 5.^{3/}

A report based on answers received from 77 out of 86 towns in Kansas shows that 77 of them maintained interscholastic teams in basketball; 76, in football; and 74, in track.^{4/}

Athletic Facilities

Ownership.-About two-fifths of the schools owned their gymnasiums; one-half, their athletic fields. Ownership by schools of other athletic facilities (see Table 5) was reported as follows: tennis courts, one-seventh; boys'

^{1/}E.E. Morley, "Report of Committee on Athletics in Secondary Schools," North Central Association Quarterly, Vol. VIII, Number 2. p. 454, April, 1934.

^{2/}Ibid. p. 456

^{3/}Ibid. p. 457

^{4/}G.H. Marshall, "The Status of High-School Athletics in Kansas," School Review, 35: 113-120, February, 1927.

locker room, about two-fifths; showers for boys, about one-third; girls' locker room, about one-third; and showers for girls, about one-fourth.

Table 5. Athletic Facilities, Their Condition, and Proximity to Schools

| Facilities | Numbers and Percentages of Schools Reporting | | | | | | | | | |
|----------------------|--|----------|-----------|----------|---------|----------|---------|----------|----------|----------|
| | Ownership | | Condition | | | | | | Adjacent | |
| | | | Good | | Fair | | Poor | | | |
| | Num-ber | Per Cent | Num-ber | Per Cent | Num-ber | Per Cent | Num-ber | Per Cent | Num-ber | Per Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| Gymnasium----- | 15 | 43 | 10 | 27 | 3 | 8 | 5 | 14 | 13 | 35 |
| Athletic field----- | 19 | 51 | 15 | 41 | 6 | 16 | 3 | 8 | 25 | 68 |
| Tennis court----- | 5 | 14 | 7 | 19 | 0 | 0 | 2 | 5 | 8 | 22 |
| Boys' locker room--- | 14 | 38 | 7 | 19 | 4 | 11 | 4 | 11 | 14 | 38 |
| Showers for boys---- | 13 | 35 | 10 | 27 | 3 | 8 | 2 | 5 | 14 | 38 |
| Girls' locker room-- | 11 | 30 | 7 | 19 | 4 | 11 | 1 | 3 | 11 | 30 |
| Showers for girls--- | 10 | 27 | 9 | 24 | 2 | 5 | 1 | 3 | 11 | 30 |

Condition.--The percentages in this part of Table 5 are based on the total number of schools answering the checking list. The condition of the various facilities judged on a basis of good, fair, and poor is as follows: gymnasium--27 per cent, report good; 8, fair; 14, poor; athletic field--good, 41 per cent; fair, 16; poor, 5; boys' locker room--good, 19 per cent; fair, 11; poor, 11; showers for boys--good, 27 per cent; fair, 8; poor, 5; girls' locker room--good, 19 per cent; fair, 11; poor, 3; showers for girls--

good, 24 per cent; fair, 5; poor, 3.

Adjacent.—It is easy to understand the great advantages gained by having the athletic facilities in or adjacent to the school. It is here that such facilities will do the greatest good for the greatest number. Table 5 gives the following data on the approximate proportions of schools that have the facilities adjacent to the school: gymnasium, one-third; athletic field, three-fourths; tennis court, one-fifth; girls' locker room, one-third; showers for girls, one-third; boys' locker room, two-fifths; showers for boys, one-third.

Finances

Sources of revenue.—The schools were requested to list in order their most important sources of income. Table 6 shows the frequency of mention of certain sources of income as amongst the three most important for the support of athletics. The table shows that about nine-tenths of the schools included gate receipts; one-half, student tax; two-fifths, entertainments like plays and pictures; one-third, magazine sales; one-fifth, appropriation of school committee; one-seventh, dances; and smaller proportions for six other sources.

Table 7 indicates that about one-third of the schools enjoy appropriations which have been made by the school

committee for the support of athletics, and that one-fourth of the schools report restrictions on the use of these funds. However, only one-fifth of the schools report this appropriation as among the three most important sources of

Table 6. Frequency of Mention of Certain Sources of Income as Among The Three Most Important for Support of Athletics

| Source of Income | Schools | |
|--|---------|----------|
| | Number | Per Cent |
| (1) | (2) | (3) |
| Gate receipts----- | 32 | 86 |
| Student tax----- | 18 | 49 |
| Entertainments (plays, pictures)----- | 16 | 43 |
| Magazine sales----- | 12 | 32 |
| Appropriation of School Committee----- | 7 | 19 |
| Dances----- | 5 | 14 |
| Card parties----- | 2 | 5 |
| Season tickets----- | 4 | 11 |
| Donations----- | 3 | 8 |
| Solicitations----- | 3 | 8 |
| Sale of candy, ice cream----- | 3 | 8 |
| Declamation contest----- | 1 | 3 |

revenue. Table 7 also shows that a little over half of the schools have an extra-curricula fund on which athletics may draw.

Admissions are charged to contests in nine-tenths of the schools, but are compulsory in only three-fifths.

An athletic tax is levied on each student in about half of the schools, but is compulsory in only 3 per cent,

Table 7. Data on Some of Common Items on Athletic Budget of Small Secondary Schools

| Item on Athletic Budget | Schools Reporting Practice | |
|---|----------------------------|----------|
| | Num-ber | Per Cent |
| (1) | (2) | (3) |
| School committee appropriates funds for athletics----- | 11 | 30 |
| Restrictions on use of these funds----- | 10 | 27 |
| Extra-curricula fund on which athletics may draw----- | 20 | 54 |
| Admissions charged to contests----- | 33 | 89 |
| Admissions compulsory----- | 23 | 62 |
| Athletic tax on each student----- | 17 | 46 |
| This tax compulsory----- | 1 | 3 |
| Payment of tax admits students to games----- | 13 | 35 |
| Uniforms provided by school for interscholastic sports----- | 34 | 92 |
| School provides uniforms for intramural sports----- | 3 | 8 |
| School charged fee for use of any halls or like----- | 8 | 22 |
| Janitor service paid for from athletic funds--- | 5 | 14 |
| None of player transportation donated----- | 17 | 46 |
| One-fourth of player transportation donated---- | 2 | 5 |
| One-half of player transportation donated----- | 4 | 11 |
| Three-fourths of player transportation donated--- | 3 | 8 |
| All of player transportation donated----- | 10 | 27 |
| Police officer never on duty at games----- | 7 | 19 |
| Police officer sometimes on duty at games----- | 7 | 19 |
| Police officer usually on duty at games----- | 9 | 24 |
| Police officer always on duty at games----- | 13 | 35 |
| Police officer paid from athletic funds----- | 12 | 32 |
| Schools "breaking even" on receipts and expenses | 26 | 70 |
| Schools reporting surplus on athletics----- | 12 | 32 |

while in about a third of the schools, the students are admitted to games on payment of this tax.

Sources of expense.-The schools were also requested to list in order the most expensive items on their athletic budgets. Table 8 shows the frequency of mention of certain items as among the three most expensive. The first three on the table were, as might be expected, equipment, transportation, and officials, with percentages respectively of 84, 59, and 57.

Table 8.-Frequency of Mention of Certain Items as Among Three Most Expensive on Athletic Budget

| Item of Expense | Schools | |
|----------------------|---------|----------|
| | Number | Per Cent |
| (1) | (2) | (3) |
| Equipment----- | 31 | 84 |
| Transportation----- | 22 | 59 |
| Officials----- | 21 | 57 |
| Rent----- | 2 | 5 |
| Janitor service----- | 1 | 3 |

Table 7 gives other data on this topic. Uniforms for interscholastic sports were provided for students by nine-tenths of the schools. However, less than one-tenth provided uniforms for intramural sports. One-fifth of the schools had to pay a fee for the use of a hall or field, and one-seventh had to pay for janitor service from athletic funds.

Since transportation is one of the most expensive

THE HISTORY OF THE CITY OF BOSTON

IN TWO VOLUMES. BY SAMUEL JOHNSON, ESQ. OF BOSTON. VOL. I. FROM THE FOUNDATION OF THE CITY TO THE PRESENT TIME. BOSTON: PRINTED BY S. KNEELAND, 1790.

THE HISTORY OF THE CITY OF BOSTON, FROM THE FOUNDATION OF THE CITY TO THE PRESENT TIME. BY SAMUEL JOHNSON, ESQ. OF BOSTON. VOL. I.

| THE HISTORY OF THE CITY OF BOSTON, FROM THE FOUNDATION OF THE CITY TO THE PRESENT TIME. BY SAMUEL JOHNSON, ESQ. OF BOSTON. VOL. I. | |
|--|-----------------------------|
| CHAPTER I. | THE FOUNDATION OF THE CITY. |
| 1. THE FIRST SETTLEMENT. | 1630. |
| 2. THE FIRST CHURCH. | 1630. |
| 3. THE FIRST SCHOOL. | 1630. |
| 4. THE FIRST HOSPITAL. | 1630. |
| 5. THE FIRST PRISON. | 1630. |
| 6. THE FIRST MARKET. | 1630. |
| 7. THE FIRST THEATRE. | 1630. |
| 8. THE FIRST CATHEDRAL. | 1630. |
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| 93. THE FIRST UNIVERSITY. | 1630. |
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| 98. THE FIRST THEATRE. | 1630. |
| 99. THE FIRST CATHEDRAL. | 1630. |
| 100. THE FIRST UNIVERSITY. | 1630. |

THE HISTORY OF THE CITY OF BOSTON, FROM THE FOUNDATION OF THE CITY TO THE PRESENT TIME. BY SAMUEL JOHNSON, ESQ. OF BOSTON. VOL. I.

items in most athletic budgets, an effort was made to determine how much of the player transportation was donated in the various schools. No transportation was donated in about half of the schools; one-fourth, in 5 per cent; one-half in 11 per cent; three-fourths in 8 per cent; and all transportation was donated in about one-fourth of the schools.

Many times situations have arisen which make it desirable that a police officer be on duty at interschool contests. Table 7 shows the extent to which schools have adopted this practice as follows: officer never on duty, one-fifth of schools; sometimes, one-fifth; usually, one-fourth; always, about one-third. In one-third of the schools, the officer must be paid for from athletic funds.

Nearly three-fourths of these small schools report that they just about "break even" on receipts and expenses, while about one-third report a surplus on athletics.

Administration of Boys' Athletics

Administrative practices.-A summary of the data on some of the more general administrative practices is given in Table 9. It is rather surprising to learn that only about one-seventh of the schools in this group under consideration belong to the Massachusetts High School Athletic Association. The table lists the principal as

the administrator of the athletic program in almost half of the schools; a teacher, in 5 per cent; and the coach, in 41 per cent. In over three-fifths of the schools, the administrator of the program also coaches; and in almost three-fifths, his duties are compulsory.

Table 9 also shows that the administrator is compensated financially in one-fifth of the schools; by a lighter

Table 9. General Administration of Boys' Athletic Program

| Administrative Practice | Schools Reporting Practice | |
|---|----------------------------|----------|
| | Number | Per Cent |
| (1) | (2) | (3) |
| Membership in State Athletic Association---- | 10 | 27 |
| Principal administrator of athletic program-- | 17 | 46 |
| Teacher administrator of athletic program--- | 2 | 5 |
| Coach administrator of athletic program----- | 15 | 41 |
| Administrator also coaches----- | 24 | 65 |
| Administrative duties compulsory----- | 22 | 59 |
| Administrator compensated financially----- | 8 | 22 |
| Administrator compensated by lighter load--- | 8 | 22 |
| Administrator not compensated----- | 21 | 57 |

teaching load in one-fifth also; and is not compensated at all in almost three-fifths of the schools.

Coaches of Boys' Athletics

Number of coaches per school.-In schools of this size, most people might assume that one coach would be the maximum. The investigation showed that this was the case in

about three-fifths of the schools (see Table 10), but it was surprising to learn that in about one-third of the schools two coaches were available for the boys.

Table 10. Data Concerning Coaches of Boys' Athletics

| Coaching Data (1) | Schools Reporting Practice | |
|--|----------------------------|-----------------|
| | Number (2) | Per Cent (3) |
| Maximum of one coach for boys----- | 24 | 65 |
| Maximum of two coaches for boys----- | 11 | 30 |
| Maximum of three coaches for boys----- | 1 | 3 |
| Maximum of four coaches for boys----- | 1 | 3 |
| At least one coach not member of faculty--- | 2 | 5 |
| All coaches members of faculty----- | 33 | 89 |
| Coaches with maximum college training of two years----- | 1 | 3 |
| Coaches with maximum college training of three years----- | 0 | 0 |
| Coaches with maximum college training of Bachelor's degree----- | 41 | 85 |
| Coaches with maximum college training of Master's degree----- | 6 | 12 |
| Coaches with at least one semester hour of professional training----- | 10 | 21 |
| Coaches with formal training in first aid--- | 23 | 48 |
| Coaches whose coaching duties are compulsory | 30 | 62 |
| Coach compensated financially----- | 15 | 31 |
| Coach compensated by lighter teaching load-- | 8 | 17 |
| Coach not compensated----- | 23 | 48 |
| Men coach girls' teams----- | 2 | 5 |
| Women coach boys' teams----- | 0 | 0 |
| Boy students coaching any sports----- | 3 | 8 |

Coaches on faculty.--Practically nine-tenths of the schools reported that all coaches for boys were members of the faculty, but two schools reported that at least one of

The first of these is the fact that the
 second of these is the fact that the
 third of these is the fact that the

| Date | Time | Description |
|------|-------|--|
| 1910 | 10:00 | The first of these is the fact that the |
| 1910 | 11:00 | The second of these is the fact that the |
| 1910 | 12:00 | The third of these is the fact that the |
| 1910 | 13:00 | The fourth of these is the fact that the |
| 1910 | 14:00 | The fifth of these is the fact that the |
| 1910 | 15:00 | The sixth of these is the fact that the |
| 1910 | 16:00 | The seventh of these is the fact that the |
| 1910 | 17:00 | The eighth of these is the fact that the |
| 1910 | 18:00 | The ninth of these is the fact that the |
| 1910 | 19:00 | The tenth of these is the fact that the |
| 1910 | 20:00 | The eleventh of these is the fact that the |
| 1910 | 21:00 | The twelfth of these is the fact that the |
| 1910 | 22:00 | The thirteenth of these is the fact that the |
| 1910 | 23:00 | The fourteenth of these is the fact that the |
| 1910 | 24:00 | The fifteenth of these is the fact that the |

The sixteenth of these is the fact that the
 The seventeenth of these is the fact that the
 The eighteenth of these is the fact that the

the coaches was not.

Training of coaches.-A question was asked to determine what the maximum college training was of each coach. The results show that one-eighth of the coaches hold their Master's degree, and all except one have their Bachelor's degree. (see Table 10)

One-fifth of the coaches had at least one semester hour of professional training, and about half had training in first aid.

Three-fifths of the coaches reported that their coaching duties were compulsory.

Compensation of boys' coaches.-Almost half of the coaches received no compensation at all, while about one-third received money for their services, and one-sixth were rewarded by lighter teaching loads.

Other data on coaches.-Two of the schools reported that men coached girls' teams, but none reported that women coached any boys' teams. The information was volunteered that in a few cases women coached boys' teams in the lower grades of the school system. In three of the schools, boy students assisted in the coaching, usually in intramural sports.

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Officials of Boys' Athletics

Officials on faculty.--Some years ago it was not uncommon for members of the faculty of small competing schools to act as officials in contests involving their schools. Table 11 shows what the situation is today in this respect. About three-fourths of the schools report that officials

Table 11. Data on Officials for Boys' Interscholastic Athletics

| Item | Schools Employing the Practice | | | | | | | |
|--|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Never | | Sometimes | | Usually | | Always | |
| | Num- ber | Per Cent | Num- ber | Per Cent | Num- ber | Per Cent | Num- ber | Per Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Officials on faculty of either competing school----- | 28 | 75 | 3 | 8 | 2 | 5 | 1 | 3 |
| Officials on faculty of any school----- | 6 | 16 | 17 | 46 | 8 | 22 | 3 | 8 |
| Officials members of State Board----- | 2 | 5 | 10 | 27 | 18 | 49 | 3 | 8 |
| Men officiate at girls' games----- | 16 | 43 | 10 | 27 | 4 | 11 | 2 | 5 |
| Women officiate at boys' games----- | 32 | 86 | 0 | 0 | 0 | 0 | 0 | 0 |

are never on the faculty of either competing school, while a few answered sometimes, usually, or always. Approximately one-sixth of the schools report that officials are never members of any faculty; half, sometimes; one-fifth, usually; and a few, always. About half of the schools report that

CHAPTER 1: THE SCIENCE OF THE EARTH

The Earth is a dynamic system, constantly changing and evolving. The study of the Earth's history and the processes that shape it is the science of the Earth. This chapter introduces the fundamental concepts and principles of Earth science, including the geologic time scale, the rock cycle, and the forces that drive plate tectonics. We will explore the evidence for the Earth's age and the processes that have shaped the planet we live on today.

| Geologic Time Scale | | | | | | | | | |
|---------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Period | Epoch | Age (Ma) | Age (Ga) | Age (Ga) | Age (Ga) | Age (Ga) | Age (Ga) | Age (Ga) | Age (Ga) |
| Quaternary | Quaternary | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Holocene | Holocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |
| Pleistocene | Pleistocene | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 | 0.00012 |

The geologic time scale is a system of chronological measurement that relates geologic time to a numerical time scale. It is the primary tool of geologists, showing the relative and absolute ages of rocks and the fossils they contain. The scale is divided into eons, eras, periods, and epochs, each representing a different interval of time. The most recent epoch is the Holocene, which began about 11,700 years ago. The geologic time scale is a continuous record of the Earth's history, from the formation of the planet to the present day.

they usually employ State Board officials, while a quarter say sometimes. Two schools never use them, and three schools, always. Two-fifths of the schools say men never officiate at girls' games; one-fourth, sometimes; one-tenth, usually; and 5 per cent, always. On women officiating at boys' games, the situation is as expected--no school reported the practice.

Student Qualifications for Athletic Participation

Physical examination.--Table 12 shows that nine-tenths of the schools give physical examinations to candidates for teams before they are allowed to participate in sports. Three-fourths report that these examinations are given annually, while one-seventh say semi-annually. In one-fifth of the schools it is given by the doctor and nurse together, while in about three-fourths it is given by the doctor alone.

Financial responsibility for injuries.--About one-fifth of the schools reported that they paid for injuries received by boys in contests. However, most of them reported that the responsibility was limited; the highest definite amount stated was \$15, while several answered reasonable, up to school committee, or like.

In an effort to protect themselves on this point, some schools have candidates bring a signed permit from

home allowing the child to participate, and limiting the financial responsibility of the school in case of injury. Two-fifths of the schools reported that permits signed by

Table 12. Numbers and Percentages of Schools Reporting Certain Student Qualifications for Athletic Participation

| Item | Interscholastic Program | |
|--|-------------------------|----------|
| | Num-ber | Per Cent |
| (1) | (2) | (3) |
| Candidates given physical examination----- | 33 | 89 |
| Examination given annually----- | 28 | 76 |
| Examination given semi-annually----- | 5 | 14 |
| Examination given quarterly----- | 0 | 0 |
| Examination given by doctor and nurse----- | 7 | 19 |
| Examination given by doctor----- | 26 | 70 |
| Examination given by nurse----- | 0 | 0 |
| Examination given by others----- | 0 | 0 |
| School pays for injuries to team members----- | 8 | 22 |
| Financial responsibility for injuries limited-- | 7 | 19 |
| Parent must sign permit allowing child to play-- | 14 | 38 |
| Liability of school for injuries limited by this permit----- | 9 | 24 |
| Candidates must meet scholastic qualifications-- | 32 | 86 |
| Players rewarded by sweaters, letters, or like-- | 33 | 89 |
| Diploma credit given for athletic participation-- | 4 | 11 |

the parent are required, and one-fourth state that these permits limit the liability of the school for injuries.

Scholastic qualifications.-It is customary for schools to require the candidate for an interscholastic team to

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meet certain scholastic qualifications. The schools in the group under consideration follow this practice quite extensively as it was reported by almost nine-tenths of them

Rewards.--As shown in Table 12, nine-tenths of the schools reward the players on their teams in the usual way by sweaters, letters, or the like.

One-tenth of the group also reported that diploma credit was given for participation in interscholastic athletics.

Miscellaneous Data--Boys' Athletics

Saturday contests.--Many of the smaller secondary schools seem to have been getting away from Saturday contests for quite some time. Table 13 gives the following information on that matter as follows: Saturday contests in Baseball-never held, 41 per cent; sometimes, 30 per cent; usually, 4 per cent; always, none; Basketball-never held, 71 per cent; sometimes, 29 per cent; usually, 4 per cent; always, none; Football-never held, none; sometimes, none; usually, 15 per cent; always, 54 per cent; Tennis-sometimes, 33 per cent; Track-never, 8 per cent; sometimes, 25 per cent; usually, 8 per cent; Soccer-never, 8 per cent; sometimes, 25 per cent; usually, 8 per cent.

Evening contests.--The only contest that would be played in the evening in these small schools would be basket-

ball. The report shows that practically all schools, either usually or always, play their boys' basketball games in the evening.

Table 13. Boys' Interscholastic Contests Held on Saturday

| Sports | Schools Holding Saturday Contests | | | | | | | |
|-----------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Never | | Sometimes | | Usually | | Always | |
| | Num- ber | Per Cent | Num- ber | Per Cent | Num- ber | Per Cent | Num- ber | Per Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Baseball----- | 11 | 41 | 8 | 30 | 1 | 4 | 0 | 0 |
| Basketball----- | 20 | 71 | 8 | 29 | 1 | 4 | 0 | 0 |
| Football----- | 0 | 0 | 0 | 0 | 2 | 15 | 7 | 54 |
| Tennis----- | 0 | 0 | 1 | 33 | 0 | 0 | 0 | 0 |
| Track----- | 1 | 8 | 3 | 25 | 1 | 8 | 0 | 0 |
| Soccer----- | 1 | 8 | 3 | 25 | 1 | 8 | 0 | 0 |

Financial compensation to officials.-About four-fifths of the schools reported that officials were paid. Two of the schools reported that students sometimes served as officials, but they received no compensation.

Type of opponent.-Very often small schools have difficulty arranging a schedule with teams in their own class. Table 14 gives the following information on this point: with first teams of own class-8 per cent of the schools played one-eighth of their schedule; 5 per cent, one-fourth; 22 per cent, one-half; 24 per cent, three-fourths; and 24 per cent, all; with first teams of smaller

class-11 per cent played one-eighth of schedule; 5 per cent, one-fourth; with first teams of larger class-8 per cent played one-eighth of schedule; 14 per cent, one-fourth; 22 per cent, one-half; 14 per cent, three-fourths; and 3 per cent, all; with second or third teams of larger class-5 per cent played one-eighth of schedule; 5 per cent, one-fourth.

Table 14. Type of Team Played in Boys' Interscholastic Contests

| Type of Team | Numbers and Percentages of Schools Reporting Following Approximate Proportions of Schedule Played With Teams of Type Designated | | | | | | | | | |
|------------------------------------|---|----------|------------|----------|----------|----------|---------------|----------|---------|----------|
| | One-Eighth | | One-Fourth | | One-Half | | Three-Fourths | | All | |
| | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (11) | (12) |
| First teams of own class----- | 3 | 8 | 2 | 5 | 8 | 22 | 9 | 24 | 9 | 24 |
| First teams of smaller class---- | 4 | 11 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| First teams of larger class----- | 3 | 8 | 5 | 14 | 8 | 22 | 5 | 14 | 1 | 3 |
| 2nd or 3rd teams of larger class-- | 2 | 5 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |

Distance traveled to games.-Transportation is a very important item to be considered by small schools when building up an athletic schedule. Table 15 gives some interesting information on the approximate proportion of

games played away from home at certain designated distances.

The table gives the following information on that subject: from 1 to 5 miles from home-30 per cent of the schools played one-eighth of their schedule of away from home games; 8 per cent, one-fourth; 5 per cent, one-half; from

Table 15. Numbers and Percentages of Schools Reporting Certain Distances Traveled To Play Contests Away From Home by Boys.

| Distance From Home | Approximate Proportion of Games Played Away From Home At Designated Distances | | | | | | | | | |
|------------------------|---|----------|------------|----------|----------|----------|---------------|----------|---------|----------|
| | One-Eighth | | One-Fourth | | One-Half | | Three-Fourths | | All | |
| | Num-ber | Per Cent | Num-ber | Per Cent | Num-ber | Per Cent | Num-ber | Per Cent | Num-ber | Per Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| From 1 to 5 miles--- | 11 | 30 | 3 | 8 | 2 | 5 | 0 | 0 | 0 | 0 |
| From 5 to 15 miles--- | 1 | 3 | 6 | 16 | 13 | 35 | 8 | 22 | 2 | 5 |
| From 15 to 25 miles--- | 4 | 11 | 10 | 27 | 9 | 24 | 1 | 3 | 1 | 3 |
| More than 25 miles--- | 9 | 24 | 3 | 8 | 3 | 8 | 1 | 3 | 1 | 3 |

5 to 15 miles from home-3 per cent of the schools played one-eighth of schedule; 16 per cent, one-fourth; 35 per cent, one-half; 22 per cent, three-fourths; 5 per cent, all; from 15 to 25 miles from home-11 per cent, one-eighth of schedule; 27 per cent, one-fourth; 24 per cent, one-half; 3 per cent, three-fourths; 3 per cent, all; more than 25 miles from home-24 per cent, one-eighth of schedule; 8 per cent, one-half; 3 per cent, three-fourths; and 3 per

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cent, all.

Averages of More Important

Aspects of Boys' Interscholastic Athletics

Number of candidates.-Table 16 shows the average number of candidates in the following sports to be: baseball, 21; basketball, 20; football, 26; track, 16; and soccer, 28.

Percentage of boys participating.-About one-third of the boys enrolled in schools that maintained baseball participated in the sport; basketball, the same; football, about two-fifths; track, one-fourth; and soccer, about two-fifths.

Number of weeks conducted.-Table 16 also shows the average number of weeks the various sports are conducted to be as follows: baseball, 10; basketball, 12; football, 10; track, 7; soccer, 8.

Number of contests per season.-The average number of contests per season in the various sports is as follows: baseball, 12; basketball, 14; football, 8; track, 4; and soccer, 9.

Playing time per contest.-The average playing time in minutes for each contest in basketball was 34; football, 44; and soccer, 37.

Number of days practice conducted.-Table 16 shows the average number of days practice in each sport to be:

REPORT OF THE COMMISSIONER

OF THE LAND OFFICE

IN RESPONSE TO A RESOLUTION PASSED BY THE
LEGISLATURE OF THE STATE OF CALIFORNIA, IN 1887,
RELATIVE TO THE LANDS BELONGING TO THE STATE,
AND TO THE LANDS BELONGING TO THE UNITED STATES,
AND TO THE LANDS BELONGING TO THE SEVERAL
INDIAN TRIBES OF THE STATE.

THE LANDS BELONGING TO THE STATE OF CALIFORNIA
ARE DIVIDED INTO TWO CLASSES, THE LANDS BELONGING
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AND THE LANDS BELONGING TO THE STATE BY VIRTUE
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TO THE STATE BY VIRTUE OF THE ACT OF 1850,
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OF THE ACT OF 1863, ARE THE LANDS BELONGING
TO THE STATE BY VIRTUE OF THE ACT OF 1863.

baseball, 3; basketball, 3; football, 4; track, 3; and soccer, 2.

Length of practice session.—The average length in minutes of a practice session in baseball was 98; basketball, 91; football, 106; track, 63; and soccer, 90.

Table 16. Averages of More Important Aspects of Boys' Interscholastic Sports

| Item of Which Average Determined | Name Of Interscholastic Sport | | | | |
|--|----------------------------------|----------------------|---------------|-------|-------------|
| | Base- ball | Bas- ket- ball | Foot- ball | Track | Soc- cer |
| (1) | (2) | (3) | (4) | (5) | (6) |
| Number of candidates----- | 21 | 20 | 26 | 16 | 28 |
| Percentage of boys' enrollment participating----- | 31 | 31 | 38 | 26 | 44 |
| Number of weeks sport conducted-- | 10 | 12 | 10 | 6 | 8 |
| Number of contests per season---- | 12 | 14 | 8 | 4 | 9 |
| Playing time per contest in minutes----- | -- | 34 | 44 | -- | 37 |
| Number of days practice conducted per week----- | 3 | 3 | 4 | 3 | 2 |
| Length of practice session in minutes----- | 98 | 91 | 106 | 63 | 90 |

Minima and Maxima of More Important

Aspects of Boys' Interscholastic Athletics

Number of candidates.—Table 17 shows the minimum and maximum number of candidates in baseball to be 10 and 35; basketball-9 and 30; football-15 and 35; track-9 and 20;

soccer-23 and 30.

Percentage of boys playing sports.-The minima and maxima percentages of the boys' enrollment of the various schools engaging in the listed sports are as follows:
baseball-20 and 100; basketball-16 and 75; football-25 and

Table 17. Minima and Maxima of More Important Aspects of Boys' Interscholastic Sports For Which Averages of Table 16 Have Been Determined

| Items | Name of Interscholastic Sport | | | | | | | | | |
|---|-------------------------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|
| | Baseball | | Basketball | | Football | | Track | | Soccer | |
| | Min-imum | Max-imum | Min-imum | Max-imum | Min-imum | Max-imum | Min-imum | Max-imum | Min-imum | Max-imum |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| Number of candidates----- | 10 | 35 | 9 | 30 | 15 | 35 | 9 | 20 | 23 | 30 |
| Percentage of boys' enrollment participating--- | 20 | 100 | 16 | 75 | 25 | 52 | 16 | 75 | 32 | 100 |
| Number of weeks conducted----- | 6 | 12 | 6 | 18 | 8 | 13 | 1 | 16 | 6 | 11 |
| Number of contests per season----- | 6 | 16 | 8 | 18 | 5 | 9 | 1 | 8 | 8 | 11 |
| Playing time per contest-minutes-- | -- | -- | 32 | 40 | 36 | 60 | -- | -- | 32 | 40 |
| Number of days per week practice--- | 2 | 5 | 2 | 4 | 3 | 5 | 2 | 4 | 2 | 3 |
| Length of practice session in minutes----- | 60 | 140 | 60 | 150 | 75 | 150 | 30 | 100 | 90 | 90 |

52; track-16 and 75; soccer-32 and 100.

Number of weeks conducted.-Table 17 shows that the minimum and maximum number of weeks baseball was conducted

were 6 and 12; basketball-6 and 18; football-8 and 13; track-1 and 16; soccer-6 and 11.

Number of contests per season.-In baseball, the minimum and maximum number of contests per season were 6 and 16; basketball-8 and 18; football-5 and 9; track-1 and 8; soccer-8 and 11.

Playing time per contest in minutes.-Table 17 reports the minimum and maximum playing time in minutes per contest for basketball at 32 and 40; football, 36 and 60; soccer-32 and 40.

Number of days practice held.-The minimum and maximum number of days per week practice was held for baseball were 2 and 5; basketball-2 and 4; football-3 and 5; track-2 and 4; soccer-2 and 3.

Length of practice session.-The minimum and maximum lengths of practice sessions in baseball were reported as 60 and 140 minutes; basketball-60 and 150 minutes; football-75 and 150 minutes; track-30 and 100 minutes; soccer-90 minutes for each.

Administration of Girls' Athletic Program

Administrative practices.-A summary of the data on some of the more general administrative practices for girls is given in Table 18. This table lists the principal as

1. The first part of the paper is devoted to a general discussion of the problem.

2. The second part is devoted to a detailed analysis of the case of a single particle.

3. The third part is devoted to a detailed analysis of the case of a system of particles.

4. The fourth part is devoted to a detailed analysis of the case of a system of particles.

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10. The tenth part is devoted to a detailed analysis of the case of a system of particles.

11. The eleventh part is devoted to a detailed analysis of the case of a system of particles.

12. The twelfth part is devoted to a detailed analysis of the case of a system of particles.

13. The thirteenth part is devoted to a detailed analysis of the case of a system of particles.

14. The fourteenth part is devoted to a detailed analysis of the case of a system of particles.

15. The fifteenth part is devoted to a detailed analysis of the case of a system of particles.

16. The sixteenth part is devoted to a detailed analysis of the case of a system of particles.

17. The seventeenth part is devoted to a detailed analysis of the case of a system of particles.

18. The eighteenth part is devoted to a detailed analysis of the case of a system of particles.

19. The nineteenth part is devoted to a detailed analysis of the case of a system of particles.

20. The twentieth part is devoted to a detailed analysis of the case of a system of particles.

21. The twenty-first part is devoted to a detailed analysis of the case of a system of particles.

22. The twenty-second part is devoted to a detailed analysis of the case of a system of particles.

23. The twenty-third part is devoted to a detailed analysis of the case of a system of particles.

24. The twenty-fourth part is devoted to a detailed analysis of the case of a system of particles.

the administrator of the girls' program in athletics in one-fourth of the schools; the coach of the girls, in three-fifths of the schools. In somewhat over three-fifths of the schools, the administrator of the program also coaches; in a similar number of schools, these administrative duties are compulsory.

Table 18. General Administration of Girls' Athletic Program

| Administrative Practice | Schools Reporting Practice | |
|--|----------------------------|----------|
| | Number | Per Cent |
| (1) | (2) | (3) |
| Principal administrator of athletic program--- | 7 | 25 |
| Teacher administrator of athletic program---- | 2 | 7 |
| Coach administrator of athletic program----- | 17 | 61 |
| Administrator also coaches----- | 18 | 64 |
| Administrative duties compulsory----- | 18 | 64 |
| Administrator compensated financially----- | 5 | 18 |
| Administrator compensated by lighter load---- | 2 | 7 |
| Administrator not compensated----- | 20 | 71 |

Table 18 also shows that the administrator of girls' athletics is compensated financially for his work in about one-fifth of the schools, by a lighter teaching load in less than one-tenth, and is not compensated at all in almost three-fourths of the schools.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

JOHN D. MATYJKA

CHICAGO, ILLINOIS

1968

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Coaches of Girls' Athletics

Number of coaches per school.—Practically all of the schools had only one coach for girls. Table 19 shows that about nine-tenths of the schools had a maximum of one coach for girls; two schools, a maximum of two coaches; and one school, a maximum of three coaches for girls.

Table 19. Data Concerning Coaches of Girls' Athletics

| Coaching Data | Schools Reporting Practice | |
|--|----------------------------|----------|
| | Number | Per Cent |
| (1) | (2) | (3) |
| Maximum of one coach for girls----- | 25 | 89 |
| Maximum of two coaches for girls----- | 2 | 7 |
| Maximum of three coaches for girls----- | 1 | 4 |
| At least one coach not member of faculty---- | 4 | 14 |
| All coaches members of faculty----- | 24 | 86 |
| Coaches with maximum college training of two years----- | 2 | 7 |
| Coaches with maximum college training of three years----- | 2 | 7 |
| Coaches with maximum college training of Bachelor's degree----- | 24 | 86 |
| Coaches with maximum college training of Master's degree----- | 0 | 0 |
| Coaches having at least one semester hour of professional training----- | 6 | 21 |
| Coaches with formal training in first aid-- | 16 | 57 |
| Coaches whose coaching duties are compulsory | 18 | 64 |
| Coach compensated financially----- | 11 | 39 |
| Coach compensated by lighter teaching load-- | 2 | 7 |
| Coach not compensated----- | 20 | 71 |

Coaches on faculty.-Almost nine-tenths of the schools reported that all coaches for girls were on the faculty, but one-seventh stated that at least one coach was not. However, most of the latter group were merely serving as assistants.

Training of girls' coaches.-A question was asked to determine what the maximum amount of college training was for each coach of girls' athletics. The results show that almost nine-tenths had a bachelor's degree, although a few had less than four years of college work.

One-fifth of the girls' coaches had at least one semester hour of professional training, and almost three-fifths had formal training in first aid.

About three-fifths of the coaches reported that their coaching duties were compulsory.

Compensation of girls' coaches.-Table 19 also shows that two-fifths of these coaches were compensated financially; less than one-tenth, by a lighter teaching load; and almost three-fourths received no compensation.

Officials of Girls' Athletics

Officials on faculty.-About four-fifths of the schools report that officials are never on the faculty of either competing school, while a few gave the answer sometimes,

or usually. Table 20 also shows that one-tenth of the schools report that officials are never on the faculty of any school; one-half, sometimes; about one-third, usually; and one school, always.

Table 20. Data on Officials for Girls' Interscholastic Athletics

| Item | Schools Employing the Practice | | | | | | | |
|--|--------------------------------|----------|-----------|----------|---------|----------|---------|----------|
| | Never | | Sometimes | | Usually | | Always | |
| | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Officials on faculty of either competing school----- | 23 | 82 | 2 | 7 | 2 | 7 | 0 | 0 |
| Officials on faculty of any school----- | 3 | 11 | 13 | 46 | 8 | 29 | 1 | 4 |
| Officials members of State Board----- | 3 | 11 | 8 | 29 | 9 | 32 | 4 | 14 |

As to officials being members of the State Board, the schools report as follows: one-tenth say never; one-third, sometimes; one-third, usually; and one-seventh, always.

Miscellaneous Data--Girls' Athletics

Saturday contests.--Table 21 shows that Saturday contests in interscholastic sports for girls are very uncommon. The names of the sports and the proportions of schools reporting that these games were never played on

The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system (1) has solutions for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied.

| Table 1 | | | | 20 | |
|---------|------|-----|-----|--------|--------|
| No. | Name | Age | Sex | Height | Weight |
| | | | | | |
| 1 | ... | ... | ... | ... | ... |
| 2 | ... | ... | ... | ... | ... |
| 3 | ... | ... | ... | ... | ... |
| 4 | ... | ... | ... | ... | ... |
| 5 | ... | ... | ... | ... | ... |
| 6 | ... | ... | ... | ... | ... |
| 7 | ... | ... | ... | ... | ... |
| 8 | ... | ... | ... | ... | ... |
| 9 | ... | ... | ... | ... | ... |
| 10 | ... | ... | ... | ... | ... |
| 11 | ... | ... | ... | ... | ... |
| 12 | ... | ... | ... | ... | ... |
| 13 | ... | ... | ... | ... | ... |
| 14 | ... | ... | ... | ... | ... |
| 15 | ... | ... | ... | ... | ... |
| 16 | ... | ... | ... | ... | ... |
| 17 | ... | ... | ... | ... | ... |
| 18 | ... | ... | ... | ... | ... |
| 19 | ... | ... | ... | ... | ... |
| 20 | ... | ... | ... | ... | ... |

The second part of the paper is devoted to a detailed analysis of the properties of the solutions of the system (1) for arbitrary values of the parameters α and β . It is shown that the solutions of the system (1) are unique for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied.

Saturday are as follows: basketball, four-fifths; field hockey, almost seven-tenths; tennis, one-half; and track, one-fourth. One-fifth of the schools said that Saturday contests in basketball were sometimes held; one-half gave the same answer for track. No school reported contests in any sport as being usually or always held on Saturday.

Table 21. Girls' Interscholastic Contests Held on Saturday

| Sports | Schools Holding Saturday Contests | | | | | | | |
|-------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Never | | Sometimes | | Usually | | Always | |
| | Num- ber | Per Cent | Num- ber | Per Cent | Num- ber | Per Cent | Num- ber | Per Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Baseball----- | 1 | 17 | 0 | 0 | 0 | 0 | 0 | 0 |
| Basketball----- | 22 | 82 | 5 | 19 | 0 | 0 | 0 | 0 |
| Field hockey----- | 4 | 67 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tennis----- | 1 | 50 | 0 | 0 | 0 | 0 | 0 | 0 |
| Track----- | 1 | 25 | 2 | 50 | 0 | 0 | 0 | 0 |

Evening contests.--Basketball was the only sport that these schools would be conducting in the evening. Almost two-thirds of the schools reported that girls' contests in this sport were usually or always held in the evening; one-fifth, never; and one-seventh, sometimes.

Financial compensation to officials.--About four-fifths of the schools reported that officials in girls' contests

were paid, while one school said they were not.

Student officials.-Very few schools reported that students took any part in the officiating at contests for girls. Only one school answered that they played a part in interscholastic or intramural contests in this respect.

Type of opponent.-Table 22 shows that the numbers and percentages of schools reporting certain proportions of their schedules as being played with teams of designated classes. The following data was secured on this point: with first teams of own class-11 per cent of the schools played one-fourth of their schedule; 29 per cent, one-half; 18 per cent, three-fourths; and 22 per cent, all; with first teams of smaller class-15 per cent of the schools reported that the girls played one-fourth of their schedule; with first teams of larger class-7 per cent of the schools played one-eighth of the girls' schedule; 21 per cent, one-fourth; 21 per cent, one-half; 7 per cent, three-fourths; and 4 per cent, all; with second or third teams of larger class-4 per cent of the schools played one-eighth of their girls' schedule. Most of these smaller schools confine the greater part of their contests to those with teams of their own class.

Table 22. Type of Team Played in Girls' Interscholastic Contests

| Type of Team | Numbers and Percentages of Schools Reporting Following Approximate Proportions of Schedule Played With Teams of Type Designated | | | | | | | | | |
|------------------------------------|---|----------|------------|----------|----------|----------|---------------|----------|---------|----------|
| | One-Eighth | | One-Fourth | | One-Half | | Three-Fourths | | All | |
| | Num-ber | Per-cent | Num-ber | Per-cent | Num-ber | Per-cent | Num-ber | Per-cent | Num-ber | Per-cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| First teams of own class----- | 0 | 0 | 5 | 11 | 8 | 29 | 5 | 18 | 6 | 21 |
| First teams of smaller class---- | 0 | 0 | 4 | 14 | 0 | 0 | 0 | 0 | 0 | 0 |
| First teams of larger class---- | 2 | 7 | 6 | 21 | 6 | 21 | 2 | 7 | 1 | 4 |
| 2nd or 3rd teams of larger class-- | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Distance traveled to games.--Table 23 deals with the distance traveled by girls' teams in order to play their away from home contests. The table gives the following information on the subject: from 1 to 5 miles from home--14 per cent of the schools reported that one-eighth of their schedule of away from home games was played within these distances; 11 per cent, one-fourth; 7 per cent, one-half; 4 per cent, three-fourths; from 5 to 15 miles from home--7 per cent of the schools played one-fourth of their schedule; 32 per cent, one-half; 21 per cent, three-fourths;

THE HISTORY OF THE UNITED STATES

| CHAPTER I | CHAPTER II | CHAPTER III | CHAPTER IV | CHAPTER V | CHAPTER VI | CHAPTER VII | CHAPTER VIII | CHAPTER IX | CHAPTER X |
|-----------|------------|-------------|------------|-----------|------------|-------------|--------------|------------|-----------|
| 1776 | 1777 | 1778 | 1779 | 1780 | 1781 | 1782 | 1783 | 1784 | 1785 |
| 1786 | 1787 | 1788 | 1789 | 1790 | 1791 | 1792 | 1793 | 1794 | 1795 |
| 1796 | 1797 | 1798 | 1799 | 1800 | 1801 | 1802 | 1803 | 1804 | 1805 |
| 1806 | 1807 | 1808 | 1809 | 1810 | 1811 | 1812 | 1813 | 1814 | 1815 |
| 1816 | 1817 | 1818 | 1819 | 1820 | 1821 | 1822 | 1823 | 1824 | 1825 |
| 1826 | 1827 | 1828 | 1829 | 1830 | 1831 | 1832 | 1833 | 1834 | 1835 |
| 1836 | 1837 | 1838 | 1839 | 1840 | 1841 | 1842 | 1843 | 1844 | 1845 |
| 1846 | 1847 | 1848 | 1849 | 1850 | 1851 | 1852 | 1853 | 1854 | 1855 |
| 1856 | 1857 | 1858 | 1859 | 1860 | 1861 | 1862 | 1863 | 1864 | 1865 |
| 1866 | 1867 | 1868 | 1869 | 1870 | 1871 | 1872 | 1873 | 1874 | 1875 |
| 1876 | 1877 | 1878 | 1879 | 1880 | 1881 | 1882 | 1883 | 1884 | 1885 |
| 1886 | 1887 | 1888 | 1889 | 1890 | 1891 | 1892 | 1893 | 1894 | 1895 |
| 1896 | 1897 | 1898 | 1899 | 1900 | 1901 | 1902 | 1903 | 1904 | 1905 |
| 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 |
| 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 |
| 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 |
| 1936 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 |
| 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 |
| 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 |
| 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 |
| 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
| 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |

The history of the United States is a story of growth, struggle, and achievement. From the first settlers to the present day, the nation has faced countless challenges and overcome them through the courage and ingenuity of its people. The story is one of a young nation that grew from a small colony to a global superpower, shaping the world as we know it today. The journey has been long and arduous, but the spirit of the American dream has always been a guiding light, inspiring generations to build a better future for themselves and their country.

7 per cent, all; from 15 to 25 miles from home-14 per cent of the schools played one-eighth of their schedule; 25 per cent, one-fourth; 18 per cent, one-half; more than 25 miles from home-7 per cent of the schools played one-eighth of girls' schedule; 14 per cent, one-half; and 4 per cent, all.

Table 23. Numbers and Percentages of Schools Reporting Certain Distances Traveled to Play Contests Away From Home by Girls.

| Distance From Home | Approximate Proportion of Games Played Away From Home At Designated Distances | | | | | | | | | |
|-----------------------|---|----------|------------|----------|----------|----------|---------------|----------|---------|----------|
| | One-Eighth | | One-Fourth | | One-Half | | Three-Fourths | | All | |
| | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent | Num-ber | Per-Cent |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| From 1 to 5 miles-- | 4 | 14 | 3 | 11 | 2 | 7 | 1 | 4 | 0 | 0 |
| From 5 to 15 miles-- | 0 | 0 | 2 | 7 | 9 | 32 | 6 | 21 | 2 | 7 |
| From 15 to 25 miles-- | 4 | 14 | 7 | 25 | 5 | 18 | 0 | 0 | 0 | 0 |
| More than 25 miles-- | 2 | 7 | 0 | 0 | 4 | 14 | 0 | 0 | 1 | 4 |

Averages of More Important

Aspects of Girls' Interscholastic Athletics

Number of candidates.-Table 24 shows the average number of candidates for girls' sports as follows: baseball, 18; basketball, 22; field hockey, 25; and track, 15.

Percentage of girls' participating.-Where the activities were maintained, 34 per cent of the girls' enrollment

participated in each of the three sports baseball, basketball, and field hockey. Sixteen per cent took part in track.

Table 24. Averages of More Important Aspects of Girls' Interscholastic Sports

| Item of Which Average Determined | Name Of Interscholastic Sport | | | | |
|---|----------------------------------|----------------------|----------------------|---------------|-------------|
| | Base- ball | Bas- ket- ball | Field Hock- ey | Soc- track | Soc- cer |
| (1) | (2) | (3) | (4) | (5) | (6) |
| Number of candidates----- | 18 | 22 | 25 | 15 | - |
| Percentage of girls' enrollment participating----- | 34 | 34 | 34 | 16 | - |
| Number of weeks sport conducted--- | 9 | 11 | 9 | 5 | - |
| Number of contests per season---- | 6 | 11 | 8 | 3 | - |
| Playing time per contest in minutes----- | - | 31 | 54 | - | - |
| Number of days practice conducted per week----- | 4 | 3 | 3 | 5 | - |
| Length of practice session in minutes----- | 90 | 85 | 108 | 60 | - |

Number of weeks conducted.-Table 24 also shows the average number of weeks the various sports for girls were conducted to be: baseball, 9; basketball, 11; field hockey, 9; and track, 5.

Number of contests per season.-The average number of contests per season in the various sports for girls is as follows: baseball, 6; basketball, 11; field hockey, 8; and

track, 3.

Playing time per contest.—The average playing time for each contest in basketball was 31 minutes; in field hockey, 54 minutes.

Number of days practice conducted.—Table 24 shows the average number of days per week practice to be conducted as follows: baseball, 4; basketball, 3; field hockey, 3; track, 5.

Length of practice session.—The average length in minutes of the practice sessions for the girls' sports was as follows: baseball, 90; basketball, 85; field hockey, 108; and track, 60.

Minima and Maxima of More Important

Aspects of Girls' Interscholastic Athletics

Number of candidates.—Table 25 shows the minimum and maximum number of candidates in baseball to be 15 and 25; basketball, 10 and 35; field hockey, 18 and 30; track, 15 and 15.

Percentage of girls participating.—The minima and maxima percentages of girls of the various schools engaging in the listed sports are reported in Table 25 as follows: baseball, 19 and 68; basketball, 10 and 68; field hockey, 20 and 46; track, 25 and 41.

Number of weeks conducted.—The minimum and maximum number of weeks baseball was conducted were 8 and 10; basketball, 6 and 16; field hockey, 6 and 14; and track 1 and 8.

Table 25. Minima and Maxima of More Important Aspects of Girls' Interscholastic Sports For Which Averages of Table 24 Have Been Determined

| Items | Name of Interscholastic Sport | | | | | | | |
|--|-------------------------------|----------|------------|----------|--------------|----------|----------|----------|
| | Baseball | | Basketball | | Field Hockey | | Track | |
| | Min-imum | Max-imum | Min-imum | Max-imum | Min-imum | Max-imum | Min-imum | Max-imum |
| Number of candidates----- | 15 | 25 | 10 | 35 | 18 | 30 | 15 | 15 |
| Percentage of girls' enrollment participating----- | 19 | 68 | 10 | 68 | 20 | 46 | 25 | 41 |
| Number of weeks conducted | 8 | 10 | 6 | 16 | 6 | 14 | 1 | 8 |
| Number of contests per season----- | 5 | 8 | 5 | 15 | 6 | 10 | 1 | 4 |
| Playing time per contest in minutes----- | - | - | 28 | 32 | 30 | 90 | - | - |
| Number of days per week practice conducted----- | 3 | 4 | 1 | 5 | 2 | 5 | - | - |
| Length of practice session in minutes----- | 60 | 120 | 60 | 120 | 90 | 150 | - | - |

Number of contests per season.—Table 25 also shows the minimum and maximum number of contests per season to be in baseball, 5 and 8; basketball, 5 and 15; field hockey, 6 and 10; track, 1 and 4.

1. The first part of the paper discusses the importance of the study and the objectives of the research.

2. The second part of the paper describes the methodology used in the study.

3. The third part of the paper presents the results of the study.

4. The fourth part of the paper discusses the implications of the study.

5. The fifth part of the paper concludes the study.

6. The sixth part of the paper discusses the limitations of the study.

7. The seventh part of the paper discusses the future research.

8. The eighth part of the paper discusses the conclusions.

9. The ninth part of the paper discusses the acknowledgments.

10. The tenth part of the paper discusses the references.

Playing time per contest in minutes.-In basketball, the minimum playing time per contest was 28 minutes, while the maximum was 32 minutes. The other sports were not run by periods of definite length.

Number of days practice held.-Table 25 gives the following data on the minimum and maximum number of days per week practice was held for girls in the following sports: baseball, 3 and 4; basketball, 1 and 5; field hockey, 2 and 5.

Length of practice session for girls.-The minimum and maximum lengths in minutes of practice sessions in baseball were 60 and 120; basketball, 60 and 120; and field hockey, 90 and 150.

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CHAPTER IV

SUMMARY AND CONCLUSIONS

Intramural Athletics

Comparatively little is being done in the field of intramural athletics for the smaller secondary schools of Massachusetts. Fifty-four per cent of the schools are carrying on some type of program for boys, and 52 per cent are doing the same for girls. However, even in these schools, the intramural program is of a greatly restricted nature.

Many of these small schools attempt to justify their failing on this point by stating that there are not enough students in their type of school to enable them to conduct both an intramural and interscholastic program of athletics, and that the students prefer the interscholastic program.

Most of the activities being conducted in intramural programs, such as basketball and baseball, have little if any carry-over value. Opportunity should be given for pupils to learn games that they are apt to participate in after leaving school. Some of the games which have this carry-over value are tennis, golf, and skating.

The chief aim of the intramural program is voluntary

THE HISTORY OF THE

ROYAL SOCIETY OF LONDON

The Royal Society of London, founded in 1660, is a learned society that promotes the advancement of natural philosophy, astronomy, and natural history. It was established by a group of natural philosophers, including Robert Boyle, Christopher Wren, and Robert Hooke, who sought to create a community of scientists who could share their knowledge and work together to advance the understanding of the natural world.

The society's early years were marked by a focus on natural philosophy, which encompassed the study of physics, chemistry, and biology. The members of the society conducted experiments and observations, and they published their findings in a series of papers and books. The society's work was characterized by a commitment to empirical science, which emphasized the importance of observation and experimentation in the study of nature.

Over the centuries, the Royal Society has expanded its scope of interest to include a wide range of scientific disciplines, including mathematics, medicine, and geology. The society has also played a significant role in the development of modern science, and it continues to be an important institution in the scientific community.

The Royal Society's history is a testament to the power of human curiosity and the pursuit of knowledge. It is a story of a group of individuals who came together to share their ideas and to work together to advance the understanding of the natural world. The society's legacy is a rich and varied one, and it continues to inspire and inform the scientific community today.

participation by all students in some of the activities being offered. A remoter, but nevertheless important, aim is an enjoyable participation after leaving school in at least one of the sports learned in the intramural program at school.

Interscholastic Athletics

Practically all the schools included in this study maintained some sort of interscholastic athletic program for boys. The only one which failed to, was a new school which as yet had not had time to organize one. Seventy-six per cent of the schools had some sort of athletic program conducted on an interscholastic basis for girls. An investigation of athletics in high-schools in the Northwest showed that "82 per cent of the schools of this size maintained athletic programs on an interscholastic basis for girls."^{1/}

A majority of the schools maintained three sports for boys, and 85 per cent, at least two sports. The situation was quite different with the girls where 43 per cent maintained only one sport and 24 conducted two.

Most of the sports conducted had no carry-over value. The most popular for boys were baseball, basketball, and football. For girls, basketball was far ahead of any other activity. There is little or no reason why activities with

^{1/} John M. Booth, "An Investigation in Interscholastic Athletics in Northwestern High-Schools," School Review, 36: 696-706, November, 1928.

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more carry-over value cannot be substituted for some of the others.

Forty-three per cent of the schools owned their gymnasiums; 51 per cent, their athletic fields. About one-third of the schools owned lockers and showers for boys and girls. Very few have tennis courts. Most of the facilities were in good condition and were adjacent to the schools.

Finance is a very important item in the athletic programs of small schools. Gate receipts were the most important source of revenue, although student taxes, entertainments, and magazine sales furnish a large part of the receipts. About one-third of the schools enjoy appropriations from school committees. Authorities say there should be more income from the latter source to enable athletics to be conducted for the greatest good of the greatest number.

The chief items of expense were, as expected, equipment, transportation, and officials. A considerable number of schools make a saving by having some of their player transportation donated.

Most of the schools just about "break even" on receipts and expenditures. The report by Booth on Northwestern high-schools said "there was a slight tendency for expenses to exceed receipts."^{1/}

^{1/} Ibid. p. 703

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Contrary to general opinion, only 27 per cent of these small schools belong to the Massachusetts High School Athletic Association.

Administration of the boys program is in the hands of the principal in about half of the schools, and under control of the coach in two-fifths of them. For the girls, the principal has charge in a quarter of the schools; the coach, in three-fifths.

In a majority of the schools, these administrative duties are compulsory, and there is no compensation for them.

In most of the schools, one coach is the maximum for either boys or girls, although in about one-third of the schools, the boys had two coaches.

Most of the coaches for both boys and girls held their Bachelor's degree, had no professional training, had formal training in first aid, were not compensated in any manner for coaching, and found their coaching duties compulsory. No woman coached any boys' teams, and very few men coached any girls' teams. Students did but little coaching. The National Survey reports that "in all schools but one, the girls' teams are coached by a woman."¹/

¹/ P. Roy Brammell, Intramural and Interscholastic Athletics National Survey of Secondary Education. Monograph Number 27. United States Government Printing Office, Washington, D. C. 1933. P.77

About one-sixth of the schools reported that faculty members of competing schools sometimes served as officials in these contests. Most schools had faculty members of some school serving as officials either sometimes or usually. Only two schools said they never employed State Board officials. Forty-three per cent reported that men never officiated at girls' games. Nobody reported that women officiated at boys' contests except down in the sixth or seventh grade. The National Survey discovered that "about 50 per cent of the schools stated that girls' games are handled by men officials." ^{1/}

Nine-tenths of the schools gave physical examinations to candidates for teams and in all of these cases the examination was given either by a doctor alone, or by a doctor and nurse together.

Only about one-fifth of the schools paid even a part of the expenses for injuries sustained while engaging in contests. About two-fifths require permits signed by parents before a student may participate in contests. The National Survey found that "in most of the schools the players themselves bear the expense." ^{2/} Marshall found that in Kansas

^{1/} Loc. cit.

^{2/} Op. cit. p.132

high schools "26 paid the doctors' bills, 28 reported they did not, and 14 paid in part."^{1/}

Practically nine-tenths of the schools required that scholastic standards be met. The same number rewarded players in the usual way by sweaters or letters. Marshal found in his Kansas survey "46 schools gave letters, but 27 did not."^{2/}

Saturday contests were seldom held except in football. In the latter sport, about four-fifths of the schools usually or always held these contests on Saturday.

Most schools reported that their basketball games for both boys and girls were usually or always held in the evening.

Practically all the schools reported that their officials were paid for their services.

Both boys and girls generally played first teams in their own class, although a considerable number played first teams of a larger class in portions of their schedules.

For both boys and girls, most of the schools played the larger part of their away-from-home contests between 5 and 25 miles from home. Eight per cent reported that one-half of this part of their schedule was played more than 25 miles from home, while 3 per cent said this situation existed for all of their away from home games.

^{1/}G.H. Marshall, op. cit. p. 114

^{2/}Ibid. p. 115

The average number of boy candidates in baseball was 21; basketball, 20; football, 26; track, 16; and soccer, 28. Monograph 27 of the National Survey reports the average for the United States in schools enrolling 100 and fewer, and those enrolling between 101 and 300 to be respectively as follows: "Baseball-17 and 20; basketball-17 and 22; football-20 and 29; track-12 and 20." ^{1/}

The average percentages of boys participating in the various sports where they were maintained were as follows: baseball, 31; basketball, 31; football, 38; track, 26; and soccer, 44. Comparable figures of the National Survey on this item for the two groups of schools previously mentioned were: "baseball-68 and 27; basketball-68 and 30; football-80 and 39; track-50 and 27." ^{2/} The North Central Report of 1934 on this topic for schools of 200 or under gives the following percentages: "baseball-33; basketball-35; football-44; and track-27." ^{3/}

Baseball was conducted on the average, 10 weeks per year; basketball, 12; football, 10; track, 7; and soccer, 8. The comparison with the National Survey is as follows: "baseball-8.3 weeks; basketball-12.9; football-10.6; and track-9.1." ^{4/}

^{1/}P. Roy Brammell, op. cit. p. 55

^{2/}Loc, cit.

^{3/}E.E. Morley, op. cit. p. 457

^{4/}P. Roy Brammell, op. cit. p. 51

The average number of contests for boys per year in the listed sports was as follows: baseball-12 games; basketball-14; football-8; track-4; and soccer 9 games. This compares with the National Survey as follows: "baseball-8.4 contests per year; basketball-16.1; football-7.8; and track-4.6." ^{1/}

The average length in minutes of the practice session for boys in baseball was 98; basketball, 91; football, 106; track, 63; and soccer, 90. The National Survey comparison is as follows: "baseball, 96.6 minutes; basketball, 90.0; football, 105.1; and track, 81.6." ^{2/}

The average number of candidates in sports provided for girls was follows: baseball, 18; basketball, 22; field hockey, 25; track, 15. The only National Survey figures available were those for the average of schools of all sizes which were as follows: "baseball, 19; basketball, 24; field hockey, 34; and track, 23." ^{3/}

Thirty-four was the average percentage of girls that participated in each of the first three sports where they were conducted, but track had 16 per cent. In 1934 The North Central Association conducted a survey among schools of this size that belonged to the organization. The results in percentages on average participation were as follows:

1/Ibid.p. 51

2/Ibid. p. 58

3/Ibid. p. 51

"baseball, 30; basketball, 28; field hockey, no report given; and track, 18." ^{1/}

The athletic situation in smaller secondary schools of Massachusetts compares, on the whole, very favorably with that in similar size schools in other parts of the United States. However, much work remains to get a greater percentage of the student body to participate in the athletic activities offered, to place more stress on sports which possess a carry-over value, and not only to subordinate to, but also to dovetail athletics with the educational aims of the school.

^{1/}E. E. Morley, op. cit. p. 457

APPENDIX

Norwood Senior High School
Norwood, Mass.

February 10, 1936

Mr. John L. Brown, Principal
Westland High School
Westland, Massachusetts

My dear Mr. Brown:

While teaching and coaching at one of the smaller high schools of Massachusetts, I often wondered what similar schools were doing in regard to Interscholastic and Intramural Athletics. Considering this a matter of interest and importance, I decided to make a survey of the situation, and drew up the enclosed checking list. Several administrators have answered it in thirty minutes.

Would you cooperate on this problem by seeing that this checking list is answered and returned to me by February 22 if possible? I am eager to have answers to all questions, but if you are unable to complete the entire list, please give approximate answers to as many as possible. Give data for current school year if available; otherwise, for the year 1934-35. Whatever information you may give, will be greatly appreciated.

If you desire a summary of my findings, please indicate

below in the space provided. A stamped addressed envelope is enclosed for your convenience.

Do you desire
a summary?
(Circle)--Yes No

Very truly yours,
D. Vincent Kenefick

Checking list on:-

Interscholastic and Intramural Athletics In
Smaller Secondary Schools of Massachusetts.

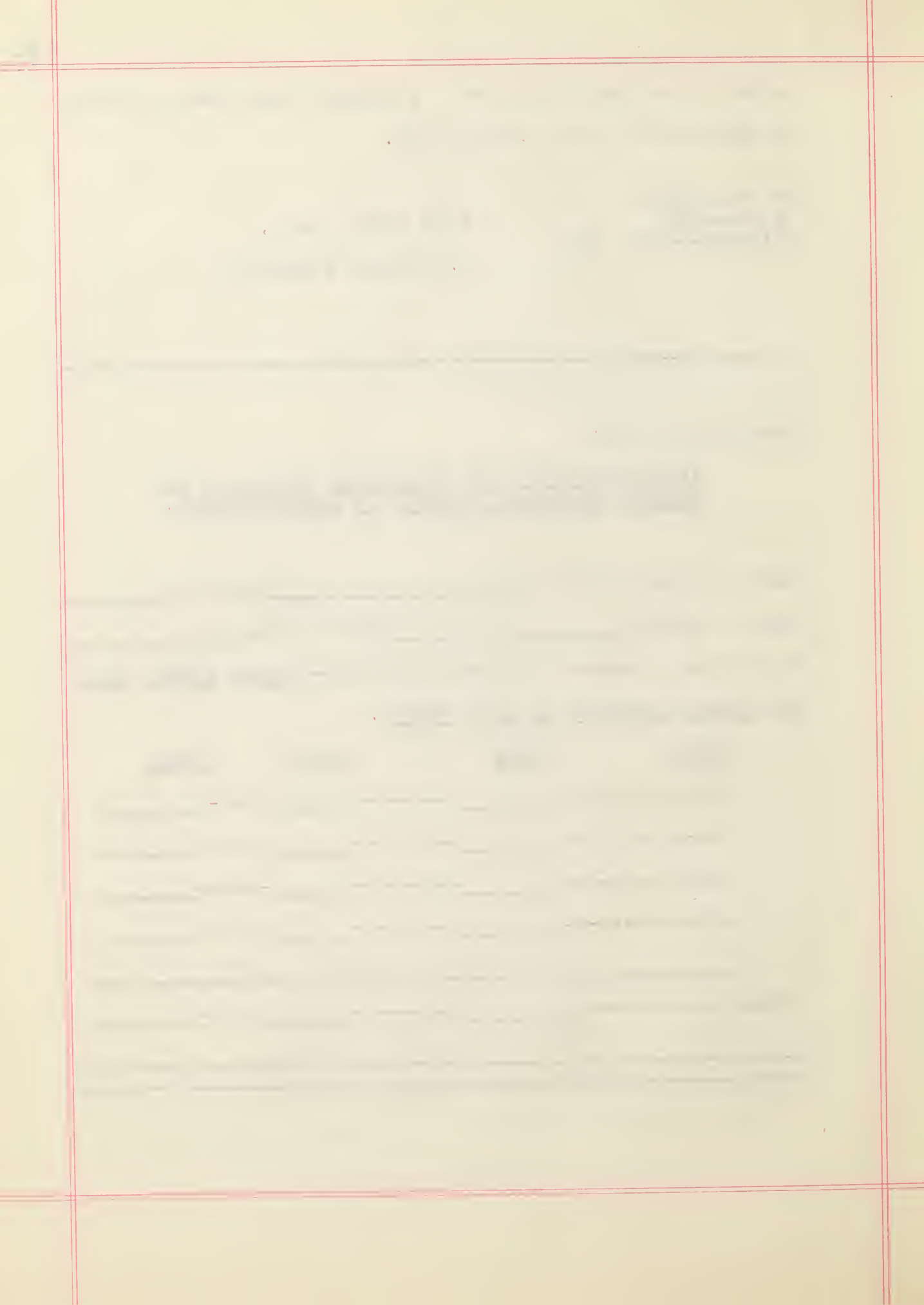
Name of person reporting _____ Position _____

Name of school _____ Name of town _____

Enrollment of school by grades and sex--Please answer only
for grades included in your school.

| <u>Grade</u> | <u>Boys</u> | <u>Girls</u> | <u>Total</u> |
|--------------|-------------|--------------|--------------|
| 9----- | ----- | ----- | ----- |
| 10----- | ----- | ----- | ----- |
| 11----- | ----- | ----- | ----- |
| 12----- | ----- | ----- | ----- |

Totals-----



I. Types of Athletic Activities Maintained by Your School

A. INTERSCHOLASTIC activities maintained for BOYS and GIRLS

| | | | | | | | | |
|--|---|-------|----------|-------|----------|-------|----------|-------|
| Types of <u>INTERSCHO- LASTIC</u> Athletic Activities | Please check in the columns below, those athletic activities maintained for BOYS and GIRLS on an <u>INTERSCHOLASTIC</u> basis in the various grades-- <u>check only for grades included in your school.</u> | | | | | | | |
| | Grade 9 | | Grade 10 | | Grade 11 | | Grade 12 | |
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| 1. Basketball | | | | | | | | |
| 2. Baseball | | | | | | | | |
| 3. Football | | | | | | | | |
| 4. Track | | | | | | | | |
| 5. Ice Hockey | | | | | | | | |
| 6. Field Hockey | | | | | | | | |
| 7. Tennis | | | | | | | | |
| If you maintain any other <u>INTERSCHOLASTIC</u> sports, list and check. | | | | | | | | |
| 8. | | | | | | | | |
| 9. | | | | | | | | |
| 10. | | | | | | | | |
| 11. | | | | | | | | |

B. INTRAMURAL activities maintained for BOYS and GIRLS

| | | | | | | | | |
|---|--|-------|----------|-------|----------|-------|----------|-------|
| Types of <u>INTRAMURAL</u> Athletic Activities | Please check in the columns below, those athletic activities maintained for BOYS and GIRLS on an <u>INTRAMURAL</u> basis in the various grades-- <u>check only for grades included in your school.</u> | | | | | | | |
| | Grade 9 | | Grade 10 | | Grade 11 | | Grade 12 | |
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| 1. Basketball | | | | | | | | |
| 2. Baseball | | | | | | | | |
| 3. Football | | | | | | | | |
| 4. Tag " | | | | | | | | |
| 5. Soccer | | | | | | | | |
| 6. Track | | | | | | | | |
| 7. Ice Hockey | | | | | | | | |
| 8. Field Hockey | | | | | | | | |
| 9. Tennis | | | | | | | | |

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If you maintain any other INTRAMURAL sports, list and check them.

| | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|
| 10. | | | | | | | | |
| 11. | | | | | | | | |
| 12. | | | | | | | | |
| 13. | | | | | | | | |
| 14. | | | | | | | | |

II. Athletic Facilities

A. Please check units of athletic equipment owned by school

- | | |
|----------------------|-----------------------|
| ()gymnasium | ()showers for boys |
| ()athletic field | ()girls' locker room |
| ()tennis court | ()showers for girls |
| ()boys' locker room | |

B. Please circle G. F. or P. to indicate whether the following equipment is Good, Fair, or Poor.

| | |
|---------------------------|------------------------------|
| Gymnasium-----G. F. P. | Showers for boys----G. F. P. |
| Athletic Field---G. F. P. | Girls' locker room--G. F. P. |
| Tennis court-----G. F. P. | Showers for girls---G. F. P. |
| Boys' locker room-G.F. P. | |

C. Please circle Yes or No to indicate if following facilities are adjacent to school.

| | |
|--------------------------|---------------------------|
| Gymnasium-----Yes No | Showers for boys---Yes No |
| Athletic Field-Yes No | Girls' locker room-Yes No |
| Tennis court---Yes No | Showers for girls--Yes No |
| Boys' locker room-Yes No | |

III. Financing Athletic Program--(Please circle Yes or No).

1. Does school com't. appropriate funds for athletics? Yes No
 If yes, are there restrictions on their use? Yes No

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RESEARCH REPORT

REPORT NO. 1000

DATE: 1970-10-15
BY: J. H. D. J. VAN DER PLOEG
TITLE: THE EFFECT OF TEMPERATURE ON THE
RATE OF REACTION OF HYDROGEN
PEROXIDE WITH FERROUS SULFATE

ABSTRACT: The rate of reaction of hydrogen peroxide with ferrous sulfate was studied at various temperatures. The reaction was found to be first order with respect to the concentration of hydrogen peroxide and second order with respect to the concentration of ferrous sulfate. The activation energy of the reaction was determined to be 50 kJ/mol.

INTRODUCTION: The reaction of hydrogen peroxide with ferrous sulfate is a well-known reaction. It is often used as a model reaction for the study of the kinetics of redox reactions. The purpose of this study was to determine the effect of temperature on the rate of this reaction.

EXPERIMENTAL: The reaction was carried out in a series of glass vessels. The concentration of hydrogen peroxide was varied while the concentration of ferrous sulfate was kept constant. The rate of reaction was determined by measuring the change in the concentration of ferrous sulfate over time.

2. Does school have an extra-curricula fund on which athletics may draw?-----Yes No
3. Are admissions charged to contests?-----Yes No
4. Is an athletic tax levied on each student?-----Yes No
5. If yes, is this tax compulsory?-----Yes No
6. Does payment of this tax admit students to games? Yes No
7. Does school provide uniforms for interscholastic sports?-----Yes No
8. Does school provide uniforms for intramural sports?Yes No
9. Is school charged fee for use of halls or fields?-Yes No
If yes, for what sports _____
10. Must janitor service be paid for from athletic fund?Yes No
11. What proportion of player transportation is donated?
(Circle)----- $\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ All None
12. Check whether you have a police officer on duty----
()Never; ()Sometimes; ()Usually; ()Always Yes No
13. Does this officer have to be paid from athletic funds? Yes No
14. Do you generally "break even" on receipts and expenses? Yes No
15. Do you generally have a surplus?-----Yes No
16. List in order the four most important sources of receipts
a. _____ c. _____
b. _____ d. _____
17. List in order the four most expensive items (such as uniforms, transportation) on your athletic budget.
a. _____ c. _____
b. _____ d. _____

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LECTURE NOTES

BY

PROFESSOR

JOHN D. COLEMAN

CHICAGO, ILL.

1950

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LECTURE NOTES

BY

PROFESSOR

JOHN D. COLEMAN

CHICAGO, ILL.

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IV. Administration of Boys' Athletic Program

A. General Administration--Boys' Athletic Program.

1. Does your school belong to the Mass. H. S. Athletic Assoc.? Yes No
2. Official position of administrator of the athletic program _____
3. Does this administrator also coach?--(circle)--Yes No
4. Are these administrative duties compulsory?-(Circle)--
Yes No
5. Check how administrator is compensated for this work--
()financially; ()lighter teaching load; () no compensation
6. Do you have physical training classes for boys?--
--(circle)----Yes No
If so, how many periods per week _____

B. Coaches--Boys' Athletics

1. How many coaches have you for the boys? _____
2. Are all these coaches on faculty of school?--(Circle)--
Yes No
If not, what coaches are not? _____
3. Check the extent of college training of the coaches--

| | | | | | |
|------------|------|------|------------|------|------|
| Coach No.1 | No.2 | No.3 | Coach No.1 | No.2 | No.3 |
| () | () | () | () | () | () |
| 2 years | | | Bach.deg. | | |
| () | () | () | () | () | () |
| 3 years | | | Mast.deg. | | |
4. State number of semester hours of professional athletic training of Coach No.1 _____; Coach No.2 _____; Coach No.3 _____
5. Check to indicate if these coaching duties are compulsory--()coach no.1 ()coach no.2 ()coach no.3
6. Check to indicate if coach has had formal training in first aid--()Coach No.1 ()Coach No.2 ()Coach No.3
7. Check method by which coach is compensated for coaching
 Financially-----Coach No.1() Coach No.2() Coach No.3()
 Lighter teaching load-Coach No.1 () Coach No.2 ()
 No compensation--Coach No.1 () Coach No.3 ()
 Coach No.2 () Coach No.3 ()

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8. Do men coach any girls' teams?---(Circle)--Yes No
If yes, state which _____
9. Do women coach any boys' teams?---(Circle)-Yes No
If yes, state which _____
10. Do boy students coach any sports?--(Circle)-Yes No
If yes, state which _____

11. How many periods are there in your school day? _____

12. State the teaching and coaching program of coaches:
Coach No.1 _____

Coach No.2 _____

Coach No.3 _____

C. Officials--Boys' Interscholastic Athletics

1. Check whether officials are on faculty of either competing school--()Never ()Sometimes ()Usually ()Always
2. Check whether officials are on faculty of any school--
()Never ()Sometimes ()Usually ()Always
3. Check to indicate if officials are members of State Board of Officials--()Never ()Sometimes ()Usually
()Always
4. Are officials compensated financially?--(Circle)--Yes No
5. Do students ever serve as officials?--(Circle)--Yes No
If yes, in what sports _____
6. Check to indicate if men officiate at girls' games--
()Never ()Sometimes ()Usually ()Always
7. Check to indicate if women officiate at boys' games--
()Never ()Sometimes ()Usually ()Always

D. Student Qualifications--Athletic Activities

1. Are candidates given a physical examination?--(Circle)--
Interscholastic sports--Yes No Intramural Yes No
2. Check to indicate if examination is given--
()Annually; ()Semi-annually; ()Quarterly

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3. Check to indicate if examination is given by--
() Doctor; () Nurse; () Others
4. Does school pay for injuries to team members?--(circle)
Interscholastic sports--Yes No; Intramural--Yes No
5. Is this financial responsibility limited?--(Circle)--
Interscholastic sports--Yes No; Intramural--Yes No
6. If answer to 5 is yes, to what amount is it limited?--
Interscholastic sports _____; Intramural _____
7. Do parents have to sign permits allowing children to
play?--Interscholastic sports Yes No; Intramural--Yes No
8. Do these permits limit liability of school for injuries?
--(Circle)--Interscholastic sports--Yes No; Intramural
Yes No
9. Must candidate meet scholastic qualifications for-----
--(Circle)--Interscholastic sports--Yes No; Intramural
Yes No
10. Are members of varsity team eligible for team in same--
Intramural sport?----- (Circle) -----Yes No
11. Are players rewarded by sweaters, letters, or like?(Circle)
Interscholastic sports--Yes No; Intramural--Yes No
12. Is diploma credit given for athletic participation?--
Yes No
If yes, to what extent

E. Miscellaneous Data--Interscholastic Athletic Activities
for Boys

1. Check to indicate how often contests in following sports
are held on Saturday. (Insert names of sports)

Basketball--()Never; ()Sometimes; ()Usually; ()Always
 _____--()Never; ()Sometimes; ()Usually; ()Always
 _____--()Never; ()Sometimes; ()Usually; ()Always
 _____--()Never; ()Sometimes; ()Usually; ()Always

2. Check to indicate how often contests in following sports
are held in the evening. (Insert names of sports)

Basketball---(☐Never; ☐Sometimes; ☐Usually; ☐Always
 ---(☐Never; ☐Sometimes; ☐Usually; ☐Always

 ____--()Never; ()Sometimes; ()Usually; ()Always
 ____--()Never; ()Sometimes; ()Usually; ()Always

3. Please circle the approximate proportion of your Inter-scholastic schedule that is played with teams of the following types

First teams of own class-----1/8 1/4 1/2 3/4 all
 First teams of smaller class---1/8 1/4 1/2 3/4 all
 First teams of larger class----1/8 1/4 1/2 3/4 all
 2nd or 3rd teams of larger class1/8 1/4 1/2 3/4 all

4. Please circle the proportion of your games played away from home that are approximately--

From 1 to 5 miles from home----1/8 1/4 1/2 3/4 all
 From 5 to 15 miles from home---1/8 1/4 1/2 3/4 all
 From 15 to 25 miles from home--1/8 1/4 1/2 3/4 all
 More than 25 miles from home---1/8 1/4 1/2 3/4 all

- V. Please insert in spaces provided below, the names of your Interscholastic sports for BOYS and answer the questions pertaining to each.

A. Name of sport _____

1. Number of candidates for team _____
2. Number of weeks in year sport conducted _____
3. Number of contests played per year _____
4. Average number of contests per week _____
5. Average playing time in minutes of each contest _____
6. Number of days in week practice conducted _____
7. Time in minutes of average practice _____
8. Circle seasons of year sport is conducted: F. I. O.
 Also circle "I" if played indoors; circle W. I. O.
 "O" if played outdoors. S. I. O.

B. Name of sport _____

1. Number of candidates for team _____
2. Number of weeks in year sport conducted _____

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3. Number of contests played per year _____
4. Average number of contests played per week _____
5. Average playing time in minutes of each contest _____
6. Number of days in week practice conducted _____
7. Time in minutes of average practice _____
8. Circle seasons of year sport is conducted; F. I. O.
also circle "I" if played indoors; circle W. I. O.
"O" if played outdoors. S. I. O.

C. Name of sport _____

1. Number of candidates for team _____
2. Number of weeks in year sport conducted _____
3. Number of contests played per year _____
4. Average number of contests per week _____
5. Average playing time in minutes of each contest _____
6. Number of days in week practice conducted _____
7. Time in minutes of average practice _____
8. Circle seasons of year sport is conducted; F. I. O.
also circle "I" if played indoors; circle W. I. O.
"O" if played outdoors. S. I. O.

D. Name of sport _____

1. Number of candidates for team _____
2. Number of weeks in year sport conducted _____
3. Number of contests engaged in per week _____
4. Average number of contests per week _____
5. Average playing time in minutes of each contest _____
6. Number of days in week practice conducted _____
7. Time in minutes of average practice _____
8. Circle seasons of the year sport is conducted; F. I. O.
also circle "I" if played indoors; circle "O" if played outdoors. W. I. O.
S. I. O.

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REPORT OF THE
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BY
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VI. Administration of Girls' Athletic Program

A. General Administration--Girls' Athletic Program

1. Official position of administration of girls' athletic program _____
2. Does this administrator also coach?--(Circle)-Yes No
3. Are these administrative duties compulsory?---Yes No
4. Check if administrator is compensated for this work--
()financially; ()lighter teaching load; ()no compensation
5. Do you have physical training classes for girls?--Yes No
If yes, how many periods per week _____

B. Coaches--Girls' Athletics

1. How many coaches have you for the girls? _____
2. Are all these coaches on faculty of school?--(Circle)--
Yes No
If not, what coaches are not _____
3. Check the extent of college training of the coaches--

| | | | | | |
|------------|------|------|------------|------|------|
| Coach No.1 | No.2 | No.3 | Coach No.1 | No.2 | No.3 |
| () | () | () | () | () | () |
| 2 years | | | Bach.deg. | | |
| () | () | () | () | () | () |
| 3 years | | | Mast.deg. | | |
4. State number of semester hours of professional athletic training of Coach No.1 _____ Coach No.2 _____ Coach No.3 _____
5. Check to indicate if coach has had formal training in first aid-()Coach No.1 ()Coach No.2 ()Coach No.3
6. Check to indicate if these coaching duties are compulsory
()Coach No.1 ()Coach No.2 ()Coach No.3
7. Check method by which coach is compensated for coaching-
 Financially-----Coach No.1(); No.2(); No.3()
 Lighter teaching loadCoach No.1(); No.2(); No.3()
 No compensation-----Coach No.1(); No.2(); No.3()
8. State the teaching and coaching program of coaches:
 Coach No.1 _____
 Coach No.2 _____
 Coach No.3 _____

C. Officials--Girls' Interscholastic Athletics

1. Check whether officials are on faculty of either competing school--()Never; ()Sometimes; ()Usually; ()Always
2. Check whether officials are on faculty of any school--()Never; ()Sometimes; ()Usually; ()Always
3. Check to indicate if officials are members of State Board of officials--()Never; ()Sometimes; ()Usually; ()Always
4. Are officials compensated financially?--(Circle)--Yes No
5. Do girl students ever serve as officials?--(Circle)-Yes No
If yes, in what activities _____

D. Miscellaneous Data on Interscholastic Athletic Activities for Girls.

1. Check to indicate how often contests in sports listed are played on Saturday--(Insert names of sports)

Basketball----()Never; ()Sometimes; ()Usually; ()Always
 _____----()Never; ()Sometimes; ()Usually; ()Always
 _____----()Never; ()Sometimes; ()Usually; ()Always
 _____----()Never; ()Sometimes; ()Usually; ()Always

2. Check to indicate how often contests in following sports are held in the evening--(Insert the names of sports)

Basketball----()Never; ()Sometimes; ()Usually; ()Always
 _____----()Never; ()Sometimes; ()Usually; ()Always
 _____----()Never; ()Sometimes; ()Usually; ()Always
 _____----()Never; ()Sometimes; ()Usually; ()Always

3. Please circle the approximate proportion of your Interscholastic schedule that is played with teams of following types.

| | | | | | |
|----------------------------------|-----|-----|-----|-----|-----|
| First team of own class----- | 1/8 | 1/4 | 1/2 | 3/4 | All |
| First team of smaller class----- | 1/8 | 1/4 | 1/2 | 3/4 | All |
| First team of larger class----- | 1/8 | 1/4 | 1/2 | 3/4 | All |
| 2nd or 3rd teams of larger class | 1/8 | 1/4 | 1/2 | 3/4 | All |

4. Please circle the proportion of your games played away from home that are---

From 1 to 5 miles from home-----1/8 1/4 1/2 3/4 All

| | | | | | |
|------------------------------------|-----|-----|-----|-----|-----|
| From 5 to 15 miles from home----- | 1/8 | 1/4 | 1/2 | 3/4 | All |
| From 15 to 25 miles from home----- | 1/8 | 1/4 | 1/2 | 3/4 | All |
| More than 25 miles from home----- | 1/8 | 1/4 | 1/2 | 3/4 | All |

VII. Insert in spaces provided below, the names of your Interscholastic sports for girls, and answer the questions pertaining to each.

A. Name of sport _____

1. Number of candidates for team _____

2. Number of weeks in year sport conducted _____

3. Number of contests played per year _____

4. Average number of contests per week _____

5. Average playing time in minutes of each contest _____

6. Number of days in week practice conducted _____

7. Time in minutes of average practice _____

8. Circle seasons of year sport is conducted; F. I. O.
also circle "O" if played outdoors; circle W. I. O.
"I" if played indoors.

B. Name of sport _____

1. Number of candidates for team _____

2. Number of weeks in year sport conducted _____

3. Number of contests played per week _____

4. Average number of contests per week _____

5. Average playing time in minutes of each contest _____

6. Number of days in week practice conducted _____

7. Time in minutes of average practice _____

8. Circle seasons of year sport is conducted; F. I. O.
also circle "O" if played outdoors; circle W. I. O.
"I" if played indoors. S. I. O.

VIII. If you care to make any comments regarding this problem of Interscholastic and Intramural Athletics, I would appreciate them. You might use the other side of this page for your remarks.

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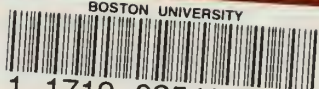
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1. The first part of the paper discusses the importance of the study and the objectives of the research. It also mentions the scope of the study and the limitations. The second part of the paper discusses the methodology used in the study. It mentions the data sources and the statistical methods used. The third part of the paper discusses the results of the study. It mentions the findings and the conclusions. The fourth part of the paper discusses the implications of the study. It mentions the policy implications and the future research. The fifth part of the paper discusses the conclusion. It mentions the main findings and the overall conclusion. The sixth part of the paper discusses the references. It mentions the sources used in the study. The seventh part of the paper discusses the appendix. It mentions the additional information provided. The eighth part of the paper discusses the index. It mentions the location of the different parts of the paper. The ninth part of the paper discusses the glossary. It mentions the definitions of the different terms used. The tenth part of the paper discusses the bibliography. It mentions the sources used in the study.

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